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TRANSACTIONS

OF THE

Massachusetts Horticultural Society,

FOR THE YEAR 1874.

PART I.

BOSTON:
TOLMAN & WHITE, PRINTERS, 221 WASHINGTON STREET.
1874.

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CHAPEL 1874-75

The discussions, of which the substance is given in the following pages, have been much more successful than any previously attempted by the society. Now that they have been interrupted by the arrival of the busiest season of the year for garden work, the committee have decided to publish the reports, together with abstracts of the proceedings at the Business Meetings, as Part I. of the Transactions for 1874, to be followed at the usual time by the Reports of Committees, etc., as Part II. It is worthy of record that the exhibitions of plants, flowers, etc., held simultaneously with the discussions, have been, both for extent and beauty, far in advance of previous shows during the winter season, the exhibitions and discussions having exerted a mutually beneficial effect, which the committee trust will continue, when the discussions are resumed in the leisure of another winter. They desire, however, to hold meetings for discussion during the summer, as subjects of interest may be suggested.

W. C. Strong,
E. S. Rand, Jr.,
J. M. Merrick,
Committee on Publication and Discussion.

April 4, 1874.

TRANSACTIONS

OF THE

Massachusetts Horticultural Society.

BUSINESS MEETING.

SATURDAY, January 3, 1874.

A stated meeting of the society was holden at 11 o'clock, President STRONG in the chair.

Charles M. Hovey, from the committee, presented the following resolutions on the decease of Prof. Agassiz : —

Whereas, The Massachusetts Horticultural Society, in the death of Louis Agassiz, has sustained the loss of one whom it was proud to have enrolled among its honorary members, a friend and co-worker in the sciences which come within the sphere and scope of our association ; therefore,

Resolved, That the members of this society appreciate the life-long labors of Prof. Agassiz, his devotion to all elements enlightened and refined, his fidelity to great truths, and his thorough earnestness in a work whose object was to awaken a higher appreciation and knowledge of both animate and inanimate creation, as revealed on land and sea, in field and forest, in valley and on mountain top.

Resolved, That we enter upon our records the acknowledgment of the grief which we individually as well as collectively feel at his sudden decease, as a token of our recognition of his services in behalf of horticultural and botanical investigation, and their importance and usefulness to the world.

Resolved, That we offer our deep sympathy to his family in this their great bereavement, and that a copy of these resolves be sent to them.

Interesting remarks were made by Francis Parkman, Marshall P. Wilder, Rev. A. B. Muzzey, Edward S. Rand, Jr., Leander Wetherell and C. M. Hovey, and the resolutions were unanimously adopted.

The finance committee reported the following appropriations for the year 1874, which were passed, and the several amounts voted.

For the library	$300 00
Expenses of committee on publication and discussion	300 00
Prizes for gardens and greenhouses . .	300 00
" " fruits	2,000 00
" " plants and flowers . . .	2,400 00
" " vegetables	1,100 00

On motion of Francis Parkman, it was

Voted, That a committee be appointed to consider the appointment of an editor of the publications of the society.

The Chair appointed Francis Parkman, Marshall P. Wilder, and Edward S. Rand, Jr.

Adjourned to Saturday, January 10.

BUSINESS MEETING.

Saturday, January 10, 1874.

An adjourned meeting of the society was holden at 11 o'clock, President Strong in the chair.

Francis Parkman, on behalf of the committee appointed at the

last meeting, reported in favor of the appointment of an editor of the society's publications. The report was accepted and Robert Manning was appointed editor.

Adjourned to the first Saturday in February.

MEETING FOR DISCUSSION.

Subject, Dwarf Pear Trees, introduced by the following essay, by E. W. Wood : —

There is not, perhaps, in the whole range of horticulture any one subject upon which the public entertain opinions more diverse than upon the one selected by the committee for to-day's discussion, and this difference of opinion undoubtedly grows out of the fact that, although under a combination of circumstances that would produce the best possible results with standard pear trees, a corresponding success might be expected from dwarfs, yet under other and less favorable circumstances the standard will grow and produce fruit where the dwarf will invariably fail. From this comes the general complaint, and some, having suffered repeated failure and disappointment, go so far as to declare the whole plan of raising and selling dwarf pear trees an imposition upon the public by the dealers, who recommend and sell them with the full knowledge that they will soon die and have to be replaced with standard trees.

There is among tradesmen no class that receives more liberal censure than seedsmen and nurserymen, and that this censure is often in a degree merited in a business so complicated, requiring perfect system and great care to ensure entire accuracy, an experience of some thirty years convinces me is true ; but that by far the larger portion of the wholesale denunciation which we hear belongs to the grower rather than the seller, is equally true.

The beginner in fruit growing visits the fall exhibitions, and, after carefully examining the long tables of pears, notes in his memorandum book the names of such as please his fancy, and, without any inquiry or investigation as to the location, variety, and preparation of soil, or care of the trees that have produced the fine specimens he has seen, he goes the next spring to the nursery, and by referring to his memoranda he secures the varieties he wants, and usually about equally divided between dwarfs and

standards. If his place is small and he does not employ regular help, he is obliged to entrust the transplanting to such aid as he can get at the busiest season of the year, and the chances are that the work is done with as little or less care than careful growers give to transplanting the most easily grown vegetables in the garden. Having secured his trees and had them placed in his grounds, he patiently waits for them to produce fruit similar to the specimens he has seen. Now if his soil happens to be shallow, with a subsoil of gravel or sand, the probabilities are that at the end of five years his dwarf trees have all disappeared, while his standards, with their longer and stronger roots foraging over a larger space, have made some growth, and the earlier bearing varieties have produced some inferior specimens of fruit; but the result is very unsatisfactory, and exhibitions are declared humbugs, and the dealer in trees a fraud.

The production of good fruit is not the work of chance. The same causes, under the same or similar circumstances, must produce the same or similar results, subject only to the variation of the seasons, and it is well known that many of the largest and best specimens of pears shown at the fall exhibitions are grown on dwarf trees. The quince delights in a deep, strong, moist soil, and grafting the pear upon it does not change the nature or wants of its roots.

I cannot better illustrate the effects of the soil upon the dwarf pear than by referring to the experience of growers of these trees in Newton. During the past three years the Newton Horticultural Society have had the subject of "pear culture" for discussion one evening each year, and these discussions have shown this fact, that the opinion of growers as to the general cultivation of dwarf trees was almost exactly determined by their location on one side or the other of the Boston and Albany railroad. It will be remembered that this road runs along at the base of the hills, the land on the north side, between the road and the Charles river, being generally level with a light dry soil, most of it having a subsoil of gravel or sand, and, unless heavily mulched, suffering severely in dry seasons. Here the dwarf trees, if set in the natural soil, even under the most careful culture, fail; the roots do not take hold of the soil, and, though they do not die at once, they make feeble growth, and eventually become loose in the ground, and either blow over or are removed as unsightly objects

from the grounds, while, in the same situation and under the same treatment, the standard will grow and produce fair, and, in some instances, good specimens of fruit.

The land upon the south side of the road is generally hilly, and the soil upon the hillsides and in the valleys between is deep and moist, much of it requiring under-draining, which the sloping surface renders comparatively easy. It contains more or less stone, and has a hard clay subsoil on a granite bed. Here the dwarfs seem to have found a congenial soil and location, as they may be found in almost every garden, under all kinds of treatment, as strong and vigorous, and continuing for years to produce their regular crops with as much or more certainty than the standards among which they grow, one grower having several seasons within the past ten years picked one hundred bushels of fine Duchess pears from his dwarf trees.

I set out upon this kind of soil, in the spring of 1862, fifty pear trees, one half dwarfs. The ground was thoroughly prepared to the depth of two feet. The trees were three years from the bud, small, but not stunted. They had the wood of the previous year well ripened, and good roots, carefully taken from the nursery rows, and not allowed to become dry before being reset. The dwarfs were low worked, or budded near the roots, and set so low as to leave two or three inches of soil above the quince portion of the stock after it became settled around the trunk. These trees made a uniform growth the first season as strong as in subsequent years. The fruit buds were all removed the first two years; the third year a few specimens were allowed to grow, and since that time the dwarfs have produced regular crops every year, and they have nearly, if not quite, all of them become partially or entirely standard trees, having thrown roots from the pear stock below the surface. The dwarfs gave me the advantage over standards of their early fruiting, and have in the mean time become, partially at least, standard trees, though they retain the fertility, habit of growth, and other properties peculiar to the dwarf, producing those varieties so unreliable and often imperfect, especially in the first years of fruiting, on the standards, with the same regularity and uniform good quality as when wholly dwarfs.

Though most of the varieties of pears may be grown upon the quince, yet to a few of the more common and desirable kinds this stock seems especially adapted; in fact, were it not for the dwarf,

some of the best varieties would be unknown among small collections, of which they form so desirable a part. The Duchess of Angouleme, one of the best, though uncertain and often worthless, especially in the first years of fruiting, on the standard, is yet one of the most reliable on the quince, often producing large and beautiful specimens among its first fruit as a dwarf. The Urbaniste is a pear of excellent quality, but its value looks dim in the distant future if we have to wait for it on the standard; while as a dwarf it is an ornament in the garden, growing naturally in pyramidal form and commencing to fruit in five or six years from transplanting, after which it is among the most reliable for its yearly returns, and the fruit, being distributed evenly over the tree, requires less thinning than many varieties.

The Vicar of Winkfield, though not a pear of first quality, yet, on account of its large size and time of ripening, desirable, and found in almost every collection, makes a strong, vigorous growth as a dwarf, and its low, compact form, trained as a pyramid, makes it easily accessible for thinning the fruit, which must be severely done to ensure the best results. The Louise Bonne of Jersey, though it will fruit abundantly on either pear or quince stock, yet generally gives the best specimens from dwarfs, if the fruit buds are all removed until the tree has gained a strong growth, and it is then allowed to bear only a moderate quantity, as its tendency is invariably to overcrop.

The list of varieties might be extended indefinitely, with their variations as dwarfs or standards, but those mentioned are among the most desirable, and are grown most successfully as dwarfs.

Leaving the question of orchard culture to those of more experience, it may be claimed for the dwarf pear, among amateurs and the large number who have small collections, and who are giving every year more attention to the cultivation of this fruit, that to all starting new places and desiring fruit as soon as possible, it is a necessity, and in order that success may be assured, let the preparation of the soil be thorough, as the cause of failure will be more generally found in the want of preparation for, rather than in the subsequent treatment of these trees. If the land is springy, or its location renders it liable to contain stagnant water, let it be thoroughly underdrained and the soil well worked over and enriched to the depth of two feet. If, on the contrary, the soil be naturally shallow and dry, spread over the whole surface a

rich compost of heavy loam and manure to the depth of one foot, and this, well worked in with one foot of the surface soil, will give the depth and quality of soil calculated to secure success with the quince stock. But with this preparation it may be necessary to mulch the ground until the trees become established, as I found from experience last season. Having set some dwarf trees in the spring, they all started well; but, about the middle of July they stopped growing, and I found upon examination the soil seemed perfectly dry down to the roots of the trees. Upon giving the ground a good mulching and a thorough watering as far as the roots extended, they again commenced making growth. In selecting the dwarf trees, take only those that are low worked, or budded near the crown of the roots, so that when they are set the quince portion of the stock may be placed at least three inches below the surface, without carrying the roots too low in the ground.

Much of the pruning usually done with the knife may be better and more easily done by frequently pinching in the stronger growing shoots. If the trees are trained in the usual pyramidal form they will frequently push a few strong shoots, which, if allowed to grow, make large, soft, unripe wood, most of which has to be cut out to preserve the form of the tree. If those shoots are pinched in, after having made as much growth as can be retained, the wood will become hard, the sap will be thrown into the less vigorous branches, and a more uniform growth will be secured; and at the time of doing this the necessary thinning of the fruit may be performed. This is a harder thing to do, especially in the earlier years, when the dwarfs are the only source from which the supply of pears can be expected, but, however thorough may have been the preparation and the cultivation afterwards, good fruit of most of the varieties will not be produced, if all that sets is allowed to remain on the trees.

Remove all the fruit blossoms the first two years. From two to a dozen specimens may be allowed to grow the third year; a very moderate crop the fourth year; a fair crop may be expected the fifth year; and after this the trees, if in good condition and well cared for, will prove the most reliable for their yearly returns.

To those having limited grounds the dwarf is a necessity, as, by due pruning, they may be grown several years in the limits of a circle seven feet in diameter, and thus many trees may be grown where it would be impracticable to set standards.

To those whose grounds are open and unprotected the dwarf is desirable, especially for the late and large varieties, as its low, compact form renders it much less exposed to the storms and winds than the higher and more spreading branches of the standard.

By all growers the dwarf must be used, if they would have some of the most desirable varieties of the best quality, and to those who, owing to conflicting opinions, are in doubt whether to set dwarf trees, the experience of many in this vicinity, who have grown them for the past thirty years warrants the statement, that if in preparation of the ground the wants of the quince roots are supplied, and the same care given them that is required to ensure the best success with standards, they will prove a continued source of satisfaction to the grower, and may be left, in full health and vigor, a legacy to those in middle life whose childhood was made glad with their first fruits.

Charles M. Hovey coincided generally in the views expressed in Mr. Wood's essay, but excepted to the part advocating the rooting of dwarfs from the pear, believing that it would be better to let them run out their natural lives, and then take them up. He thought they would not make as good standards as those originally grafted on pear stocks, on account of their tendency to send out one or two strong roots on one side of the tree, instead of rooting regularly all round the tree. If allowed to root from the pear they must either be planted at the proper distance for standards at first, or thinned out to such a distance.

Mr. Wood admitted the tendency to which Mr. Hovey objected, but said that it could easily be obviated by the operation of "lipping;" that is, removing the earth and cutting several tongues at intervals around the tree by an upward cut with a gouge or knife, beginning the cut at the bottom of the swelling of the pear where it joins the quince. These cuts should be from an inch to an inch and a half long and a quarter of an inch wide, and kept open by pressing a little earth under the tongue. The earth should be replaced over them, when they will soon send out roots freely all round the tree. The best time to perform the operation is after the middle of June, when the tree is growing rapidly and the ground is warm, so as to excite the production of roots. The soil should be kept moist by mulching or otherwise; in fact, the

conditions of success are precisely the same as those required for striking cuttings. Standards made in this way have the advantage over those grafted on seedling pear stocks that they do not send down long tap roots into cold, ungenial soils to the injury of the tree and fruit.

Hervey Davis, chairman of the Fruit Committee, said that his estimate of the value of dwarf pear trees was such that if there were no dwarfs he did not think there would be any inducement to go into the cultivation of pears as a matter of profit. He spoke of the orchard of Stephen Hill at Allston, where, for several successive years large quantities of Duchess pears had been sold from dwarf trees, as the most successful instance of pear growing within his knowledge. He favored planting deep enough to root from the pear, as, when the trees grow large and tall, they are apt to blow over, if supported only by the small root of the quince. If kept properly pruned and pinched they would not be liable to this danger, but however closely young and enthusiastic cultivators may at first attend to keeping their trees dwarf, they find it every year an increasing labor, and sooner or later it is neglected, and then the trees shoot up heavy tops and fall over, unless supported by the strong pear root.

Benjamin G. Smith said that a large part of his pear trees were French dwarfs, and that he had been highly pleased with their success.

Marshall P. Wilder had not had the pleasure of hearing Mr. Wood's essay, but he had had a great deal of experience with dwarf pear trees during the last forty years, and was strongly in favor of them on account of their early bearing. Two thirds of his collection were originally on quince roots, and by using this stock he was not only able to test many new varieties in much less time than would have been required with standards, but to furnish himself with fruit in a very few years. Viewed in this light dwarfs were not only exceedingly useful to the amateur and experimenter with new fruits, but a great blessing to the family. He did not concur with Mr. Hovey's view that the dwarf, when rooting from the pear sends out one-sided roots. Some varieties, such as the Vicar, send out roots freely all round, without the trouble of lipping, and, the quince dying out, they made the very best standards he had got. His system was to plant standards sixteen feet apart, with dwarfs between, and when the standards grew so large as to

require all the room, the dwarfs which had rooted from the pear were transplanted to other situations, and were found to be amply supplied with fibrous roots, without any tap root whatever. In this way a large proportion of his trees were made. Where varieties like the Bartlett, Doyenne Boussock, and Belle Lucrative send out roots from one side only, they still make fine standards when they get well established. In regard to the durability of trees on quince roots, Mr. Wilder said that he had some which, though not rooted from the pear, were more than thirty years old, among which were Urbanistes that each bore regularly more than a barrel a year.

MEETING FOR DISCUSSION.

Saturday, January 24, 1874.

The subject for discussion was "Horticultural Prizes," opened by Charles M. Hovey, who produced the manuscript of a report made by him in 1845, as member of a committee to consider the expediency of substituting medals for money prizes. The report was in favor of awarding medals, and it had been a matter of much gratification to him that the first gold medal awarded was to Gen. Dearborn, for his services to the society. The subject was one on which there is a variety of opinions, and in which he had always felt a deep interest. Mr. Hovey spoke of the importance of liberal premiums in the arts, and said that the question for us is whether our prizes are sufficiently large. At the exhibition at Bath, England, in June, 1873, the amount of prizes offered was £1,312, more than our whole annual prize list; and the highest prize for a collection of plants was £20, yet there was only one competitor. Our exhibitions of plants are increasing in importance, and while our prizes for fruits are sufficiently large — larger than those of the London Horticultural Society, — he thought the prizes for flowers should be increased in consideration of the years of labor spent in producing specimen plants, and the danger of injury by bringing in to exhibition. He thought it could not be expected that amateurs would receive the leading

prizes, as they have not the same inducements as nurserymen to incur the expense of producing specimen plants. Only one amateur took a prize at the English exhibition before alluded to, but he (Mr. Hovey) desired by every means to encourage amateur growers.

William Gray, Jr., differed from Mr. Hovey in regard to the number of prizes taken by amateurs as compared with nurserymen. He found, by reference to the transactions of the society, that out of twenty-two prizes for plants, at our rose and annual exhibitions, in 1872, nine were taken by nurserymen and thirteen by amateurs. But he agreed in the view that many of the prizes for plants were too small, and compared some of them with similar prizes offered in England, such as Heaths, for which we offer two prizes of six and five dollars, while at the Bath exhibition eighty dollars were offered; and Dracænas, for which we have two prizes of ten and six dollars against sixty-seven dollars at Bath. Our prizes for the best six Geraniums, not variegated, are six and five dollars, while in England forty dollars are offered. Each of these geraniums required twenty-five square feet to grow in, and it cost nine dollars to bring in the plants. He thought the prizes for collections were large enough, as was shown by the competition. There is just as much honor in taking a small prize as a large one, if there is competition.

President Strong remarked on the difference between this country and England, and said that we certainly do find money prizes an attraction, as was shown by the collections of winter pears exhibited for prizes to-day.

Edward S. Rand, Jr., concurred with Messrs. Hovey and Gray that the prizes for plants should be larger. He said that amateurs do not generally compete for money, and that it is no honor to take a prize without competition. Our orchid prizes last summer were eight and six dollars, while it cost twelve dollars to bring three plants into the hall. He would not drop heaths from the prize list, as had been suggested, as it would take two years to grow premium specimens. Epacrises, which it had also been proposed to omit, were more easily grown. Mr. Rand spoke of one of Mr. Gray's tree ferns, the beauty of which was spoiled for the season by bringing in to exhibition. He thought gratuities should be separate from prizes, and did not believe in a society laying up money, but would encourage larger exhibitions.

Mr. Hovey said he was glad to hear from Messrs. Gray and Rand. The prize for Indian Azaleas, six specimens, is twenty-five dollars, and it would require twenty-five years to get them up to the size expected. They must each have fifty square feet of space in a house with a cool temperature, and then be removed to a warm house to bloom, and the plants are ruined after having been brought to exhibition, for that year. Messrs. Veitch & Co., the English nurserymen, have a gardener who gives his whole time to the preparation of such plants, and often to the exhibition of plants at several shows.

C. M. Atkinson said that he looked with peculiar pride on the medals which he had gained. He thought there should be a proportion between the amount of a prize and the object for which it is awarded, and spoke of the difference between the care and labor required to grow Phloxes or a mammoth squash, and Mr. Sargent's Azaleas. He also criticised the award of a silver medal for a garden plan, and said that prizes were not offered at proper seasons, and that there was a want of discrimination between what could be cut in the garden and plants requiring eighteen months to grow. He would have a gradation of medals, pomological and floricultural silver and bronze medals.

Marshall P. Wilder said that the object of the society is, first, to create a love for fruits and flowers, and second, to present them for exhibition. He thought it was no honor to win without competition, and compared the exhibition of to-day with those at the commencement, as showing what had been effected by competition for prizes. He believed that amateurs would make exhibitions equal to those of England. In allusion to what had been said in favor of omitting certain plants from the prize lists he remarked that it would not do to drop any of these beautiful things, and that he had begun again to raise seedling camellias and azaleas, and to import new gesneras, gloxinias, and plectopomas. Growing ericas and geraniums is so expensive that few persons will appropriate the money for them. He thought the premiums for collections should be raised.

Mr. Gray thought that the prizes for collections of plants had induced sufficient competition.

Elisha Tower said he loved the generous feeling that brought plants here, and he did not believe the growers cultivated them for the money prizes they bring. He would reduce the prizes for

fruits and add to those for flowers, but he disliked debt in any form and would not increase the prizes so as to prevent paying off our debt, for our hall would not be our own until we had paid for it.

Mr. Hovey spoke with approval of the custom in England of giving two equal first prizes, when objects are so nearly matched that it is difficult to discriminate between them.

James Cruikshanks said that in England the prize lists were divided into nurserymen's, gardeners' and cottagers' classes. The object of the nurserymen is to get a medal which they can show to their friends, while to cottagers the money is an object. Noblemen and gentlemen are pleased to have their gardeners take prizes.

Edwin W. Buswell, treasurer of the society, spoke of the possibility that our income may not always be as large as now, and of the necessity of large expenditures on the building soon. He remarked that the plants, of the cost of which so much had been said, were not grown solely for exhibition, and that the time and money spent in collecting wild plants were not appreciated.

MEETING FOR DISCUSSION.

Saturday, January 31, 1874.

James O'Brien showed several pots of remarkably fine Cyclamens, and read a paper describing his method of growing them as follows: —

The cultivation of the Cyclamen is very simple, and they amply repay the little attention they require. As a house plant they have no superior, and they are indispensable for cut flowers in winter, their elegant forms and varied colors adding grace and beauty to any combination of flowers, either in baskets, vases, or bouquets.

December is the best time to sow the seed, and in twelve to fifteen months from the time the seed is sown, very handsome specimens can be produced. The seed should be sown in pans, in a light sandy soil, and with the assistance of a little bottom heat it will vegetate in from five to six weeks after sowing. When the seedlings

have formed bulbs about the size of peas they should be pricked out into thumb pots (using a soil of equal parts of loam, leaf mould and sand) and carefully watered as they require it, never letting them get dust dry. As the pots become filled with roots, shift into those of a size larger, using the same compost, with less of the sand. As the summer advances it will be better to put the plants in a cold frame, where they can be shaded from the intense sun, but have abundance of light and air at all times. Water carefully, as they require it, never losing sight of the fact that there is to be *no drying off;* but the plants must be kept in a nice growing condition until they flower. As the weather grows cool and there is danger of frost, the plants should be removed to the greenhouse, keeping them near the glass, and as nearly as possible maintaining the temperature of the house at fifty, although they will bear a temperature of ten or fifteen degrees less with impunity before they flower. A cold, damp atmosphere is injurious to the plants when in flower, producing the "beautifully mottled and spotted varieties," which we see constantly advertised in the seed catalogues, and if long continued in such an atmosphere the "beautiful spots" spread and run, degenerating into a dingy, dirty color. As the plants go out of flower they should be placed in a dry, airy position, with full exposure to the sun, and gradually dried off. When the bulbs are thoroughly ripened they should be planted out in the garden, in a dry position, where they can have some protection, in case of heavy or long continued rains. Repot in September in the soil before recommended, and give little water until the roots and foliage are nicely developed. Keep the plants in the cold frame until there is danger from frost, when they should be removed to the greenhouse, and water as before directed for the seedling plants.

Mr. O'Brien added that the plants exhibited by him were one and two years from seed. The seed of the former was sown Jan. 27, 1873, in the ordinary heat of the greenhouse bench, and the bulbs afterwards pricked out in two-inch pots and shifted as required into four, five, and six-inch pots. Flowering the first year is not injurious to the plants. The critical time is after flowering. They should then be placed in a good position, and some water should be given. The bulb increases in size through the summer, and care should be taken that it is well ripened, and

watered when there is danger of getting soft. They may be potted for flowering the first of September, in two parts of fibrous mould and one of leaf mould, and should have but little water until the foliage is well developed. Mr. O'Brien has had the leaves of plants frozen without injury, if properly cared for afterwards. They are sometimes allowed to grow in the same pots for two years, but, though they produce good flowers, the foliage is poor. He has one seedling with distinct foliage, and one with double flowers. There is no better house plant; they are easily taken care of, flower abundantly, and are free from insects. Mr. O'Brien's seed was imported from Williams, of London, as very fine. The plants were grown among other flowers where the temperature could not be regulated solely with reference to their wants. It should be about 50°, but the first of the week it fell to 28° without injury.

C. M. Hovey said he had been much pleased with Mr. O'Brien's specimens, and thought he had been remarkably successful with them. The plant had been a great favorite with him, but he had seen very few good specimens. Though it had been a long time in cultivation, its treatment was not well understood. It can be propagated only by seed, and the varieties cannot be perpetuated. Williams', Wiggin's, and Wetherell's strains are all good. The plants require care rather than labor. Mr. Hovey said he had saved seed and sown it in July, in a pan on sand, with three pipes under the bench, and kept it in a house from 50° to 55° this winter. Two hundred plants could be raised in a pan from eight to ten inches in diameter. The day before he pricked off four pots of seedlings, the largest bulbs being as large as peas. Unless placed in heat the seeds require from four to six weeks to vegetate. He thought Mr. O'Brien's plants must have had more heat than was stated. The bulbs must be cared for after flowering, and not kept too wet nor too dry. He would plant out after blooming, in a prepared bed of light soil, taking them up in good season, say September 10, and potting in the soil recommended by Mr. O'Brien. The Italian species are more hardy than the *Persicum*. He had a lot spoiled by being slightly frosted, and would guard against frost, especially when the plants are about to flower.

Mr. O'Brien said there is a great difference in the germination of the seed. Not all the bulbs produced are of the size of these. At times these have had considerable heat. The plants were pricked out the end of June, when they were about the size of a

large pea. Some of them are still no larger than small peas. It is difficult to keep imported bulbs; they come in bad order. He agreed with Mr. Hovey in regard to planting out, and would protect from wet.

Mr. Hovey said there were two causes of failure in cyclamen culture, neglect after blooming and omission to repot. Large pots are not necessary, they are injured by placing in large pots and giving too much water. English cultivators always recommend moderate sized pots, but the bulbs sometimes grow too large to get into these pots. They require good drainage and not the one shift system, but continued shifting, if fine specimens are required.

C. B. Gardiner, who also had some fine specimens on exhibition, said that he had but little experience, and had tried different methods. They will not do well in heat; 55° nearly spoiled the blossoms. Heat drives out the flowers prematurely and makes them short and stubby. Large pots are not necessary; they do not seem to fill up the pot with roots. He had a root with the crown completely gone, but it threw out leaves and flowers on the sides and did not seem to be injured. He sowed his seed the first of April, and potted part the first week in July, and part later. Those potted off early are much the largest. He would shift often, changing the soil if not the pot.

Mr. O'Brien said that the seed should be sown carefully, a quarter of an inch apart. He had never tried peat, but had tried liquid manure, and did not like it.

Mr. Hovey said that roots were sometimes procured from Italy by English cultivators, and planted in peat, and were very successful. The soil was imported also.

John G. Barker, chairman of the Flower Committee, said that he had been much interested in the cyclamen. It was a plant well adapted to the window. He had four plants in three-inch pots, the bulbs of the size of an English walnut, each with from ten to eighteen flowers and buds. They were potted in loam and placed in a north window. They require care in watering. He put a small earthen pan under the pots and filled with water two or three times a week. In proportion to the size of the bulb his plants were as good as Mr. O'Brien's.

James Cruikshanks said that fifty years ago but few cyclamens were to be seen, as the best gardeners were ignorant of their culti-

vation. After flowering they were put under the stage and kept either too wet or too dry.

President Strong introduced the subject of protecting trees from canker worms, having received a circular describing Mathew's Tree Protector. A model of the contrivance, which consists of a zinc trough with a roof of the same material, was also shown. The only novelty appeared to be in the oil, which, it is claimed, not only destroys the worm mechanically, filling up the breathing pores like ordinary oil, but is also poisonous, and, the outside of the trough being covered with oil by capillary attraction, the worms are killed in the attempt to crawl over it, and hence the trough is never filled with their dead bodies.

Benjamin P. Ware said he had had some experience in protecting trees; the objection to this contrivance is the expense, twelve cents per inch of internal diameter, or for trees twenty inches in diameter, two dollars and forty cents per tree. Unless the protectors are carefully looked to they are ineffectual; leaves blow in, spiders spin webs across, thus making bridges over which the worms travel. It would be unwise to use this protector, when with the same or a little more care they can be protected with tarred paper and printers' ink for ten cents per tree, as was done by Joseph S. Howe of Methuen, who kept an exact account of all expenses of thus protecting a large orchard. The tarred paper will last two years; the ink should be renewed in from one to two weeks, or in very dry weather twice a week. It is very important to protect the trees when the insects first begin to run, which always happens with the first frost in autumn, and never before. The insects will deposit their eggs on the bark below the ink, and it should therefore be applied when the eggs first hatch, to prevent the larvæ from ascending.

Edwin W. Buswell said the trees would soon outgrow these protectors, and then the cultivator would be subjected to the expense of removing them to smaller trees and providing new ones for the larger trees. He spoke with approval of those used by John G. Barker, when gardener to G. G. Hubbard of Cambridge, which consisted of a square box, about a foot high, with a zinc trough covered by a roof on the outside, the space between the box and tree being filled with coal ashes. The oil used was crude petroleum.

Mr. Hovey said the oldest plan was the best, and that Mr. Clapp used the boxes with troughs forty years ago. Trees must be tarred Sundays, for the worms would run that day as well as others. A protector costing two dollars and a half per tree would be too expensive with apples at fifty cents a barrel.

Benjamin G. Smith said that he had captured eight hundred grubs in an evening, and that he had ascertained by actual count with a microscope that each patch of eggs laid by a single insect contained from one hundred to one hundred and fifty eggs.

President Strong spoke of the method adopted by Thomas Sawyer of Boxford, as described in the "Transactions of the Essex Agricultural Society" for 1872, of laying the gutters on the ground, which Mr. Sawyer had found quite as effectual as fastening them on the sides of a box, and less than one third as expensive.

Mr. Ware said that he had seen Mr. Sawyer's trees. The tar has resin oil mixed with it, and is stirred up or replenished three or four times in autumn, and the same in the spring.

Marshall P. Wilder spoke of the time when the canker worm was committing great devastation in Dorchester thirty years ago. They were so numerous that they could be heard travelling through the grass, but were mostly confined to a narrow strip running through the town. A concerted movement was made by fruit-growers to destroy them, and the method of enclosing the trees with boxes, around the top of which was a wooden gutter, filled with tar and whale oil, was then invented. They cost then about thirty-five cents each. Oil was added from time to time to keep the tar liquid. This plan has been used by Messrs. Clapp and others to this day, and Mr. Wilder believed it to be not only entirely effectual, but the cheapest of many contrivances which he had tested, including zinc and cast-iron troughs, glass rings, etc. The boxes put on at the time referred to lasted a long time, and he had this winter been burning up some which had remained around his trees ever since.

James Cruikshanks said that when so many plans had been proposed he was glad to hear of a return to first principles. He alluded to a plan for destroying the worms by the use of electricity.

The sense of the meeting appeared to be that either the bands of ink or troughs of oil were effectual, provided the ink was renewed sufficiently often, and that the leaves, spider webs, etc., which

would afford a passage to the worms were removed from the troughs, and the tar or oil kept liquid, a majority of the speakers preferring some form of trough, and among these the cheapest wooden ones as equally effectual with more costly metal ones; and that nothing had yet been devised which would relieve the cultivator from the necessity of care and attention.

BUSINESS MEETING.

Saturday, February 7, 1874.

An adjourned meeting of the society was holden at 11 o'clock, President Strong in the chair.

Voted, That the Massachusetts Horticultural Society protest against the indiscriminate destruction of the elm trees on Tremont street, known as the "Paddock Elms," and that the president and recording secretary be a committee to confer with the Committee on Public Grounds in relation thereto.

The following named persons were elected to membership: —

Miss Harriet S. Tolman, of Boston.
Benjamin Brintnall, "
William Lumb, "
John Atherton, of West Newton.

Adjourned to the first Saturday in March.

MEETING FOR DISCUSSION.

Owing to a misunderstanding in regard to an expected paper on window gardening, the time was occupied by an impromptu discussion on the Amaryllis, which was introduced by Charles M. Hovey by an allusion to the fine specimen of *A. Cleopatra* placed on the table by John B. Moore, and to the new variety, *pardina*, shown by James Comley a short time since. It is a tribe of plants which should be better known to the flower-loving public. As Mr. Hovey had been obliged to grow them, among other plants where their peculiar needs could not be consulted, they failed to

show their full beauty. Like all other plants they are easily cultivated when one knows what they require. The secret is in properly drying off the bulbs after flowering. They cannot be prevented from flowering. Mr. Hovey had had bulbs packed in boxes which sent out leaves and flower buds. He would urge amateurs to procure good bulbs, and put them now in a temperature of from 60° to 65°, and then remove them to a colder house, as they come into bloom. They should be potted from month to month, so as to have a succession of bloom. Later, about June 1, they may be planted in the open ground. After blooming the flower stems should be cut off, then the plants should be watered until they show signs of ceasing to grow, and then dried off gradually.

Edward S. Rand, Jr., thought they could not be grown as a bedding plant, our season being too short to perfect the bulb for flowering another year.

Mr. Hovey had had a large bed of seedlings which he had treated as before stated. He would lift the bulbs, shake off the soil, and place in boxes. Planted June 1, they would flower in July, and have until October to perfect their bulbs. He said that the late Joseph Breck's experience had been the same as his.

Mr. Rand replied that the amaryllis, unlike the Japan lily, formed the flower for the next year within the bulb, as could be seen by cutting open the bulb, and that the foliage required to be ripened more than that of almost any other bulb.

Benjamin G. Smith agreed with Mr. Hovey in regard to ripening, and said that his experience in out-door cultivation was similar to Mr. Hovey's.

Mr. Hovey said that Mr. Van Houtte, at his extensive nurseries at Ghent, Belgium, cultivates the amaryllis entirely in the open air. It was only latterly that he (Mr. Hovey) had had enough bulbs to plant in the open ground. There were many plants which, when first introduced, were supposed to be tender, because too rare and valuable to be risked out doors, but which, as soon as an opportunity of testing was afforded, were found to be comparatively hardy. The tree pæony as well as the amaryllis, was an example of this. His seedling bulbs, when planted out last year, were not larger than crocus bulbs; now they are as large as those of *A. formosissima*. Mr. Hovey mentioned another fine plant of this family, *Imantophyllum miniatum*, of which a remarkably well-

grown specimen was exhibited by C. M. Atkinson. Mr. Hovey said that he had three species, *I. nobilis*, *cyrtanthæflorum*, and *miniatum*, and there was hardly a week in the year but some of them were in flower. He thought that these also might be planted in the open air, say about the middle of May; the experiment was worthy of trial.

Mr. Atkinson being called on, said there was no particular merit in the cultivation of the plant exhibited by him, but he would be sorry to treat his plants as recommended by Mr. Hovey. Without good foliage it is impossible to have good flowers. The plant, *Imantophyllum*, is a gross feeder, and if allowed would soon fill a three-feet tub with its roots. His treatment is to deluge the plant with water early in the summer, and afterwards to place it where it will have three or four hours' sun in the day. It is as easy to produce a hundred spikes of flowers as five. It is necessary to starve the plants for about six weeks in autumn, in order to force them to produce flower buds. Mr. Atkinson referred to an article on the cultivation of this class of plants in the "Journal of the London Horticultural Society" for 1847, and remarked that some establishments in England cultivate as many as two thousand pots. He thought that planting in the open ground would produce large bulbs, if they were wanted for sale, but would not recommend it if flowers were desired.

Marshall P. Wilder spoke of the exquisite manner in which the amaryllis was formerly cultivated by J. W. Boott, whose garden and greenhouses were where the Revere House now stands, and who received from England bulbs of new and rare varieties, worth two or three guineas each. What had been said of the case of cultivation is correct. He spoke of the facility with which new varieties are produced, the flowers being very easily fecundated, and the seed germinating freely. He expressed the hope that the cultivation of these and other plants which have gone out of favor would be revived.

John B. Moore said that the bulb of the plant exhibited by him was purchased last year when it was an inch and a half in diameter; it is now twice as much. He agreed with Mr. Atkinson that the secret of growing good flowers is first to secure good foliage. He grew the bulb in a pot until it showed signs of drying. It was then allowed to become dormant, and when signs of starting appeared was grown in a warm place. He thought the bulb was strengthened by growing so long in the pot.

MEETING FOR DISCUSSION.

Saturday, February 14, 1874.

We were again disappointed in our expected essay, C. M. Atkinson, who was to have read a paper on greenhouses, being, on account of the state of his eyes, forbidden by his physician to read or write.

Edward S. Rand, Jr., who had on exhibition a fine plant of *Angræcum sesquipedale*, being called on by the president, made the following remarks: — The generic name is derived from *angurek*, the Malayan name, and the specific name from the astonishing length of the nectary. Most of the species are natives of Africa, and this one is found only in Madagascar, where the trunks of large trees are completely covered with the flowers. It has a large, star-like, waxen white flower, powerfully fragrant from six in the evening through the night, being strongest at about eleven o'clock. Like the Vandas and Saccolabiums, the flowers grow only in the sun. The plant requires much heat, but is of very easy culture. It is of very slow growth, the plant exhibited being ten years old. It begins to flower the first of December, and continues in bloom until March, individual flowers lasting a month. The plant is remarkable for sending out roots from the base of the leaves, at right angles with them, while the flower spikes follow the direction of the leaves. Specimens of the flowers were brought from Madagascar in 1857 by Rev. Mr. Ellis, an English missionary. The flowers of most orchids are incapable of self-fertilization, and require the aid of insects, and when those of this species were examined by Mr. Darwin, he declared that their fertilization involved the necessity of a moth with a proboscis ten inches or more in length. Naturalists, however, one and all, declared that because no moth had yet been found with a proboscis of such extraordinary length, there could be none; but, on a subsequent voyage to Madagascar, Mr. Ellis not only brought home living plants, but moths with a proboscis of the length which Mr. Darwin had declared necessary. This moth, in seeking the honey at the bottom of the spur, so ruptures the parts of the flower as to convey the pollen masses to the stigma. The plant exhibited by Mr. Rand is, probably, one of three only in this country, the other two

being in the possession of George Such, of South Amboy, N. J., and Erastus Corning, of Albany, N. Y. Besides this species, Mr. Rand has *A. caudatum*, the flowers of which are white, with green sepals.

Mr. Rand also exhibited a plant of *Lælia peduncularis* (*lælia*, chaste, pure, delicate). The *Lælias* are a large family closely allied to the *Cattleyas*, differing only in the number of pollen masses; indeed it is not easy to say in regard to some of the species to which genus they belong, on account of the difficulty of distinguishing whether they have six or seven pollen masses. This is one of the most desirable species, being easily grown in any common hot-house. The flowers are of a delicate rose color, and the dark glossy green pseudobulbs are remarkably beautiful.

Charles M. Hovey inquired whether the fragrance of the *Angræcum* did not attract the moths. He spoke of the many plants which have been introduced by Ellis and other English missionaries, while our missionaries have introduced few or none.

H. W. Fuller thought that Mr. Hovey, in his last remarks, had touched on a very important matter, and that in the selection of missionaries we should have men with eyes as well as ears. He spoke of the wonders of creation as shown in the minuteness of the infusoria revealed by the microscope, and at the same time of the enormous masses formed by their remains, and thought that if the missionaries were able to teach the natives these and similar facts, and to show them by the microscope how nature has provided for the wants of flowers, they would see in them the evidence of a Creator.

Mr. Hovey, speaking of horticultural education, alluded to the remarks of the "Gardeners' Chronicle" on M. Baltet's brilliant essay on that subject, and said that, notwithstanding the war, the French were in advance of the English in the love of horticulture. He spoke of the many new roses and other flowers raised by Pradel, the originator of the Marechal Neil rose, Margottin, Verdier, and others, and said that our discussions should not be confined so much to the methods of horticulture, but rather to creating a love for it.

James Cruickshanks read the following paper on FOREST AND FRUIT TREE CULTURE: —

The planting and care of forest trees has now become a matter

of great importance. In many places the materials for building, for fencing, and for fuel are already scarce and high-priced. Cutting down the monarchs of the primeval forests is likely to be a more serious matter than many of the owners of these forests ever imagined. In some places even in New England one might as well be on a western prairie, so far as any shelter or protection from trees can be obtained, and the example of western farmers and railroad corporations in planting trees for shelter and timber, might be followed to the greatest advantage. This subject has been deemed by the American Association for the Advancement of Science of so much importance that they have asked the action of the United States Government to prevent the needless destruction of forests, and to provide for their renewal.

As instances of the utility of planting trees, it is stated that some years ago Upper Egypt had only five or six rainy days in a year; but the Pasha planted millions of trees, and the annual average is now forty-six days of rain. In a once fertile region about Trieste the forests were swept away, and barrenness followed; but millions of olive trees were planted and carefully reared, and now the former productiveness has returned.

In rearing a forest, it is advisable to plant thickly, first planting the trees which are intended to remain at a proper distance, that they may attain a good size, without interfering with each other. Among them should be planted others, which may be termed nurses, such as Scotch fir, Scotch larch, etc. These, being rapid growers, may remain until the plantation requires thinning, by which time the firs and larches will be large enough for common fencing and similar purposes. These groups and belts will afford to our finer fruit trees that protection which was so forcibly advocated by Col. Wilder in his address before the Pomological Society at Richmond, Va., in 1871.

Any one preparing for planting trees will succeed much better if the soil is mellow and friable, for it is as necessary to have the land well drained, for most species of trees, as for a kitchen garden or a lawn. Great care should be taken in replanting to cut smooth all the roots that may be rough and uneven, for some of the roots will get damaged, although the greatest care is taken in lifting.

Many, when planting either fruit or ornamental trees, jam them into the ground as if setting fence posts, and then complain of failure. My practice has been to dig the pit at least a third wider

than the length of the roots, and even more, if the soil was poor, filling up with good soil, the trees thereby getting a good start.

Except in extreme cases I would not advise any one to transplant large trees. In the first place it is very expensive, and next the chances of success are not nearly so great as with smaller trees. Still, there are times when a good sized tree requires to be removed, to save those that are around it; in such cases the removal may be worth trying, for, if attended with success, a naked appearance may be remedied at once. Great care will be required in the operation, making sure to trim all the broken roots. But, as a general thing, good nursery trees, of ordinary size, will give more satisfaction in a few years, as there will be more uniformity in their growth and general appearance.

If a tree dies in the pleasure grounds after it has attained a large size, it is of little use to attempt to fill the blank by planting a young tree, the others having taken possession of the ground with both roots and branches.

The larch is not valued as its good qualities deserve. Its tanning properties are second only to those of the oak; it is of great durability, piles of oak driven in the river Thames having been replaced twice, while those of larch, in the same situation, remained unchanged. When larch trees have been denuded of their branches and bark in the month of May, and left to stand for a year, the timber, so prepared, has been found remarkably free from tendency to warp.

It is very necessary to study the habits of trees and the size to which they will grow, especially in ornamental grounds. The neglect to do so has caused many mistakes and much disappointment. Not unfrequently we have seen Norway spruces, hemlocks, Scotch firs, etc., planted within three feet of an avenue through a lawn, and immediately behind these large trees, such fine shrubs as rhododendrons, azaleas, kalmias, and roses. In a few years the trees grew over the shrubs and ruined them; whereas, if the case had been reversed, the beauty of the shrubs would have been preserved, and the trees would have made a good background for them. I know of one case where the trees had to be taken up after they had killed the shrubs, and the place is now as bare as it was when the house was built, now nearly twenty years ago.

Every one who owns, or even rents a suburban residence, would add much to his own comfort and enjoyment, as well as to his

pleasure, besides a refreshing shade for travellers, should he plant a few trees such as elms, maples, lindens, etc., along the highways near his dwelling, every one opposite his own house, to be followed by all those owning farms, till city greets town, town greets village, and village greets hamlet, with lines of handsome shade trees, highways and by-ways being thereby adorned and beautified, and the weary sheltered and refreshed by their grateful shade.

Thinning Plantations. —While it is desirable that forest trees should be thickly planted, as they thereby nurse each other, it is also of great importance that the thinning be attended to in proper time, for the longer it is left undone, when it should be attended to, say in from twelve to fifteen years after planting, the more they will get entangled together and the harder it will be to decide which to take and which to leave, and in a short time their beauty will be destroyed and their individuality lost; but an inexperienced backwoodsman should by no means be allowed to go there with his axe until all the trees to be cut down are distinctly marked.

Those having charge of public grounds would do well to attend to the trees under their care before it is too late. Many trees, such as elms and maples, soon crowd each other and lose their beauty, therefore begin in time to thin out, either by pruning or by taking out some entirely, so as to permit the cheerful sunshine to fall occasionally on the paths, and not let the minds of promenaders be impressed with the idea that they are in a dense forest, where neither sun nor air can be seen or felt, and grass can never grow.

Pruning should never be attempted by the inexperienced, except under the direction of a practiced teacher, for otherwise they are more likely to do harm than good. We sometimes see, in suburban gardens, fruit trees, especially pear trees, which have made good healthy shoots from one to three feet in length, headed down as squarely as if the pruner had been trimming a hedge; and, as a consequence, a thick, bushy head of young wood, instead of a well-shaped head formed by thinning regularly, cutting out some of the shoots altogether, and shortening those left according to their strength. An experienced pruner, by taking a glance at a young tree, can easily see what buds should be removed and what should be left, and can, in a few minutes, prune it with his thumb nail, so that the tree will require little more care for the season. Trees thus managed will have few large limbs requiring to be cut away.

Many trees are pruned too severely, even by practical men, while others are left almost in a state of nature by the inexperienced.

In regard to the time of pruning there is a great diversity of opinion even among experienced men, the time recommended ranging from midwinter to midsummer, some implying that doing the work well is of more importance than the time of doing. When trees are pruned in winter in a northern climate the bark will sometimes crack open and make a bad wound, which will not heal properly. I prefer to do such work any time from the first of April to the first of June; the sap is then flowing; the alburnum forms a callosity, and the healing process commences at once. The next best time is when the autumn growth is rapid and vigorous.

The same diversity exists with regard to root-pruning as to pruning the branches; one contends that it is the means of weakening the tree; another that root-pruning has been successfully practiced for throwing fruit trees into a bearing state, and also as a preventive of fire blight. I have seen it adopted when fruit trees were growing with excessive vigor, for the purpose of checking their growth, and with good effect, as they would soon after begin to show fruit buds. Dwarf pear trees are generally recommended to be planted deep enough to cover the junction between the stock and the scion two or three inches, so that, if roots should be formed from the scion, some sorts may be preserved that would otherwise be lost by failure on the quince; reliance can be placed on root-pruning to keep them in proper order. Detailed directions for root-pruning may be found in Rivers' "Miniature Fruit Garden."

Shade trees are often as barbarously used as fruit trees, and in many cases more so when inexperienced men are sent to prune the trees on the sides of the streets in our cities and towns. I knew a gentleman who had a fine English elm which he had planted himself; it was about thirty feet high and well furnished, and both shaded and sheltered the west side of his house. It was on a very wide street with a broad sidewalk, not interfering with the accommodation of the public in any way whatever. I recollect the sorrow and regret depicted on his countenance one day when he went home and found that all that was left of his fine tree was a tall, naked stem, standing like a flagstaff with a small bunch on the top of it like a broom; being on the side of one of the public streets it had to be rooted up.

It is nothing uncommon to see a limb cut off leaving a stump from two to three inches long on the tree. Aside from the unsightly appearance such a wound can never heal over. The limb should be sawed off as close as possible to the stem, and then smoothly trimmed with a chisel or sharp knife.

The president mentioned an article in the "Gardeners' Monthly," in which the benefit of scraping trees was asserted, and a suggestion that this operation would probably have a good effect in preventing the cracking of the White Doyenne pear, was regarded as probably correct. He called on Robert Manning for his views in regard to the subject.

Mr. Manning said he desired first to correct the statement in the "Gardeners' Monthly," that a committee of the Massachusetts Horticultural Society asserted that much good resulted from scraping the rough bark from fruit trees. He was under the impression that the report* of the committee was to the contrary effect, and on referring to it he found his impression correct. In regard to the benefit of scraping trees his views agreed with those of the committee rather than with those of the "Gardeners' Monthly." The roughness of the bark was the natural effect of age, and was seen in the healthiest trees. It might be prematurely produced, but in this case scraping it off would no more reach the cause of the trouble than scraping off the pustules from a man's face would cure him of small-pox. The remedy must go deeper. The difference between the roughness of the bark caused by age in a vigorous tree and that produced prematurely by neglect was well known to experienced orchardists, though difficult to describe. In the former case the scales would be larger and part more freely from the under portions; in the latter, they would be small, indurated, and cling closely to the bark beneath. The remedy is to renew the vigor of the tree by good cultivation and liberal manuring. The wash used many years since by the late Capt. Lovett, of clay, cowdung, ashes, and sulphur, was spoken of as preferable to lime-wash. Mr. Manning mentioned instances where the bark of trees which presented a soft, green, healthy appearance, had, when exposed to the sun by cutting off the limbs,

*This report was printed, but there is now no copy in the possession of the society. If any member has a spare copy, it would make an acceptable addition to the library.

to graft them, become browned and hardened on the southerly side. He thought this indicated the benefit of protection from the sun, and he thought the rough bark such a natural protector. In regard to the prevention of cracking he was doubtful of the effect to be produced by scraping, as fruit frequently cracked on young trees with the smoothest and healthiest bark, and he had known perfect specimens of the White Doyenne and other varieties liable to crack produced on old, rough-barked trees.

Mr. Hovey said that trees in gardens are in an artificial condition, and may be benefited by scraping, but like pruning it should not be done without limitation. He said that trees were often injured by scraping too severely, or "to the quick," and instanced the case of the orchards of the late Benjamin V. French, where the growth of the trees was checked or entirely stopped for a year or two by a very severe scraping and washing with rather strong lime-wash. Mr. Hovey had had the rough bark scraped from his trees twice. He believed that the cause of the cracking of fruit was the absorption of water, and that scraping was not the remedy.

Mr. Manning said that he did not understand the "Gardeners' Monthly" as advocating the scraping of trees "to the quick."

Hervey Davis, chairman of the Fruit Committee, in answer to the president said that age increases the looseness of the outer bark, and that in fifteen years' experience he did not think his trees needed scraping, nor that it would have any effect in preventing cracking of the fruit. When he wished to produce such pears as would take the first prize, he had watered freely in dry weather. Mulching might answer to some extent as a substitute, but he thought the leaves and branches need watering as much as the root. He thought a slight scraping of the loose bark of old trees might be beneficial; but would not recommend deep scraping.

Benjamin G. Smith felt glad that Mr. Davis had let out the secret of how to produce such fruit as would take first prizes, as he had a weakness for them himself. In the early days of his fruit culture he enquired of an experienced neighbor as to his views on scraping trees, and was answered that an abundant supply of barnyard manure was the best scraping.

Marshall P. Wilder concurred in the views of Messrs. Hovey and Davis that scraping trees would not prevent the fruit from cracking. Trees under careful culture will not become prematurely rough or mossy. Neglected, or planted too closely, especially in

undrained soils, they become mossy, and should be washed, say once in five years, with a pound of potash to a pailful of water, and a little cowdung and clay, the latter partly to show what trees have been washed. They should also be lightly scraped. In a good soil there is no need of scraping till they grow as old as Mr. Davis has described.

MEETING FOR DISCUSSION.

Saturday, February 21, 1874.

No special subject having been assigned for to-day's discussion, the president called upon members to bring up any matter of interest. John G. Barker, chairman of the Flower Committee, said that he noticed two fine orchids upon the table, one of them an ever-blooming species, and that he should be glad to hear from Edward S. Rand, Jr., the exhibitor, concerning them.

Mr. Rand said that the orchid referred to, *Dendrochilum glumaceum*, was a native of the Philippine islands, whence it was brought ten or fifteen years ago. The plant exhibited is one, and the largest one, of only two in this country. The specific name is derived from the resemblance of the spikes of flowers to the awns of wheat The flowers are not showy but very delicate, drooping gracefully from the extremity of a slender, curved stalk, and are delightfully fragrant. Many orchids are rendered comparatively unsightly by shedding their leaves before blooming, but this is both evergreen and ever-blooming. The flowers last very long, and are valuable for bouquets, wreaths, etc. The sheaths of the leaves are delicately tinged with red. The plant is of easy culture in a mixture of fibrous peat and moss. The best location is in the hot-house, but it may be grown very successfully with roses. The plant is propagated by division of the pseudobulbs, and is of very rapid growth. Unlike many other orchids in which it is difficult to produce "back-breaks," the plant is of symmetrical form. One other species, *D. filiforme*, is even more delicate than this, and has a larger and more beautiful flower, but it is probably not yet introduced into this country.

The other orchid exhibited, *Lycaste* (*Maxillaria*) *Skinneri*, was introduced from Guatemala about 1836. It is a cool orchid of the

easiest culture, and can be grown in the greenhouse. Its flowers, which are large and showy, are produced at all seasons, but mostly from January to April. There are many varieties of this species, from the purest white to the deepest purple. It is an admirable house plant, and can be grown in perfection in any room not heated by a furnace, where the air can be kept sufficiently moist, but unlike other species, such as *L. aromatica*, the flowers are unfortunately destitute of fragrance.

Charles M. Hovey, holding in his hand a spike of flowers of *Phaius grandifolius* (*Bletia Tankervilleæ*), said it was a good old orchid, not nearly so much cultivated as it ought to be. The growth of orchids has been made too much of a special culture by English gardeners, but much of the mystery with which it has been surrounded may be done away with. In this country we strike out new methods. English cultivators, for instance, do not grow flowers in quantities in beds in houses erected for that special purpose as American commercial cultivators do. In growing orchids the character of the pots and mould is important. While some species are very fastidious, others can be grown in any open soil. To pour on water in unlimited quantity and give no drainage, we might expect to fail. Mr. Hovey said he had divided *Cattleyas* and planted in ordinary potting soil, and had been surprised at their vigorous growth. This *Bletia* may be grown in ordinary soil. The plants must have rest and light to ripen their bulbs. He had planted *Peristeria elata*, known as the Holy Ghost flower, in the same soil, but was unsuccessful in flowering it until an English gardener told him the bulb must be almost dried up, and by withholding water for two months and keeping in the hot sun, it was induced to flower freely. The *Bletia* may be bloomed in perfection, with from ten to fifteen flower spikes, in an ordinary greenhouse — not a cold house. Mr. Hovey desired to see the love for this class of plants increased, and said that by beginning with this *Bletia* and the *Dendrobiums* we might have an assortment which could be easily cultivated in a greenhouse.

Mr. Barker spoke of three fine plants of *Phaius grandifolius* which he saw at Mr. Rand's, with from thirty to forty spikes of flowers on each, and was gratified to find that they could be cultivated so easily. In his practice of orchid culture he had generally adhered to the directions given in Williams' "Orchid Grower's Manual," and with the exercise of common sense, had been pretty

successful. *Dendrobium nobile* can be cultivated in greenhouses; he saw it so grown at Mr. Rand's. He had found the Holy Ghost flower easy of culture; the secret is, as Mr. Hovey says, to give it a good rest. The *Zygopetalums*, *Mackayi* especially, there is no difficulty in growing in ordinary soil, or in a mixture of sods about two years old, the size of a walnut, sphagnum sifted to free it from dust, and potsherds broken fine. He recommended those who desired to cultivate orchids to visit Mr. Rand's house and read Mr. Williams' book.

The president remarked that the *Bletia* would undoubtedly be profitable for florists, and that the question for us is not merely how much plants will endure, but how they can be grown to greatest perfection.

Mr. Rand said that the *Bletia* was one of the most easily cultivated orchids. The three plants referred to by Mr. Barker were bought a year ago last November at an auction sale of plants from Wilson's nursery. No one seemed to know what they were, and as Mr. Rand entered the room the auctioneer knocked them off to him at one cent each. They were ragged looking things, potted in the red New Jersey clay. They were placed in the grapery until December 10th, when the frost got in and nipped the plants badly; afterwards potted in three pans, in rough peat, with good drainage, and kept cool until signs of growth appeared, when they were placed in the orchid house and kept there until September. They were then deprived of water until December 1st, when the flower spikes began to push. It takes a long time for flower spikes to push up four feet. The species is very hardy.

There has been a great deal of needless mystery about orchid culture; owing perhaps to their singular growth and the weird, grotesque forms of the flowers. The secret is perfect drainage, keeping the plants clean, never letting the thermometer fall below 60° for East Indian kinds, and 45° for "cool orchids," keeping free from insects, shade, and a good season of rest. These rules are, however, general, and must be somewhat varied for special cases.

Mr. Hovey remarked that *Goodyera discolor* is recommended by London florists for cut flowers, — for amateurs, if not dealers. He thought 60° pretty high for an ordinary greenhouse; his houses are rarely up to 60° at night; 50° would do very well for *Zygopetalums*. Sixty years ago Mr. Lowell had about the only collection of orchids in this vicinity. Fifteen years ago Mr. Hovey was

at Mr. Buchanan's, in New York, and purchased twenty-five plants at two dollars each, but did not give them much attention. They were cultivated in pots as usual; but, three years ago, he shook them all out and potted in soil. There has been, as previous speakers have said, too much mystery thrown about their culture; what is wanted is good judgment and common sense. People seeing them grow on blocks think there must be something marvellous about them; but it does not follow, because they grow naturally on trees, that they cannot be grown in soil. Many of the Sikkim rhododendrons in their native habitats grow upon trees, but are cultivated in soil. He was once in Rollison's orchid house in August. The thermometer was up to 100°, and the whole house was reeking with water and steam, so that it would have been impossible for a lady to enter it. This is not necessary, though the plants require plenty of water. They must have more water in our dry climate than in England. There should be four inches of drainage in the pots, with a night temperature of from 50° to 60°, plenty of water and plenty of drainage.

Mr. Rand said that 60° at night was the maximum for East Indian orchids, while 50° was sufficient for the Mexican species. The thermometer falls to 42° at night in some parts of his house. He has found the *Bletias* and *Zygopetalums* benefited by liquid manure.

Marshall P. Wilder spoke of the necessity of a moist atmosphere, shade, and plenty of water, the latter especially, if over the flue of a greenhouse. J. W. Boott had the only collection forty years ago, including *Bletia Tankervilleæ*. They were cultivated in an ordinary greenhouse, occasionally closing a door, and grew without piling up bricks and charcoal about the stem.

James Cruikshanks said that he could recollect the *Bletia Tankervilleæ* as long as he could recollect house plants. As has been stated, it can be grown in any greenhouse, but far stronger in the pine stove.

Mr. Rand stated, in answer to an inquiry by Mr. Wilder as to what became of Mr. Boott's collection, that it was sold, a part being purchased by his father, Edward S. Rand, senior, and that some of these were now in his own possession. Others went to the Cambridge Botanic Garden, where some of them still survive. He also took occasion to remark that in the culture of orchids it is important to avoid direct drafts and sudden changes. The air

should be introduced at the bottom, so as to become warmed by passing over the flues, or else be introduced from another house. The *Phaius* is a native of India, where it grows freely by the watercourses.

Mr. Hovey spoke of the interesting history of the collections of Mr. Lowell and Mr. Boott. Mr. Lowell, as early as 1832 or 1834 exhibited the coffee plant and other rare tropical plants, as is shown by the records of our exhibitions at that time. In 1838 or 1840 Mr. Hovey himself imported large plants of *Zygopetalum crinitum*, which, with a *Pandanus reflexus*, and other rare plants, were soon after destroyed by fire.

The president alluded to some fine specimens of the new Marie Louise violet, and called for the opinions of members in regard to them.

Mr. Hovey said that for multiplicity of flowers and general commercial purposes it was not equal to the old Neapolitan.

Denys Zirngiebel, being called on by the president as one who had large experience in the cultivation of violets, said that the Marie Louise bloomed pretty well until the first of January, but now had ceased altogether, while the old Neapolitan was now at its prime.

Mr. Wilder agreed with Messrs. Hovey and Zirngiebel.

C. B. Gardiner, the exhibitor of the Marie Louise, said that he had but a few plants, and that owing to a bad season they were small. With him the Marie Louise flowers earlier than the Neapolitan, being now at the height of its bloom, while the Neapolitan will not be for a month. He finds the dealers are willing to pay more for it.

Mr. Hovey would not be understood to condemn it. It is of a little darker color than the other, but he thought dealers would not pay much more for it, as they would for roses. He thought it might do much better in frames than in the house. The Neapolitan has long stems, standing up well, so as to be easily gathered, while the Marie Louise lays down. The latter is also subject to red spider. Mr. Hovey said he was first to cultivate the new variety, "Czar," here; it will not do in our warm climate. It runs to foliage too much, and he has condemned it, except as a garden variety, where it flowers late in autumn.

Mr. Zirngiebel said there is a white variety of the Czar advertised in the French journals. He cultivates the Czar in cold

frames; it is of fine color, and he considers it a valuable variety. It is very prolific in frames.

Mr. Hovey thought it might be valuable for a succession for amateurs.

Edwin W. Buswell said that in a previous discussion the idea was conveyed that the Amaryllis would not flourish, if grown long in the same pot, and called attention to a vigorous plant of *A. fulgida* exhibited by Mrs. S. Joyce, showing eight flower stalks, with an average of five flowers and buds to each, and which had remained in the same pot for two years, as refuting the idea.

Mr. Hovey said he would have people procure bulbs of all this family and cultivate them, especially of the *Vallota*, which is equally as beautiful as the Amaryllis, but which gardeners either do not seem to care about, or do not know how to cultivate, while the ladies are very successful with it as a house plant. The gardeners put it into a greenhouse and keep it continually watered and excited, while the ladies put it into the cellar, where it enjoys a season of rest.

Mrs. Joyce did not think the amaryllis can be cultivated in the open ground. The plant exhibited by her to-day was a single bulb, which she planted in a pot two years ago; the first year it sent up one spike of flowers. A month ago she took it from under a shelf and put it in a pan of manure water. She thought that if you separate them and put them in the open ground, you would lose them. She had found them all die off when thus planted; the bulbs want to dry in the pot.

Mr. Hovey thought the variety on exhibition was the old Prince of Orange, which has a great tendency to make offsets, and if the roots are not kept cramped in the pot, it will not flower; but they do beautifully in the open ground. Offsets weaken the bulb.

The president alluded to the need of variety in these discussions.

Mr. Wilder expressed his gratification at the increased interest in the weekly exhibitions, and in these discussions, which were recommended by the president in his inaugural address. He felt especially grateful for the bringing up of good old plants which have been laid on the shelf, and thought that if no other benefit had been produced this would warrant these meetings. But what

pleased him most of all was to have ladies present and allowed to speak. He alluded to the decision of the Supreme Court, reported this morning, affirming the constitutional eligibility of ladies as members of school committees [applause], and said it was a great gain to have the ladies with us, to give us their experience in the growth of plants, as well as in the growth of families.

MEETING FOR DISCUSSION.

Saturday, February 28, 1874.

Joseph Tailby having on exhibition buds of the new rose, Eliza Tailby, was called on to state its origin and characteristics. He replied that it originated in a sport of the Isabella Sprunt. As compared with the parent, the plant is shorter jointed, and blooms more freely. It is nearly thornless, and the foliage is more pleasing, resembling that of a spiræa or willow. The flower is of a lighter shade of color, the buds and petals are longer, the petals are squarer and of more even thickness, the bud opens differently, and the general character bears more resemblance to the Yellow Tea than does the Isabella Sprunt. It has not been cultivated by any other person than himself.

C. M. Hovey spoke of the classification adopted by one of the leading French rose growers according to the character of the plant as erect or spreading, with long or short prickles, three or five leaflets, etc. The variety under discussion has a smooth character, which makes it quite distinct. Of the large number of new roses yearly introduced, but a very small part prove valuable, perhaps not more than twenty-five out of a hundred. One may be a very fine flower and valuable as a summer bloomer, but not for winter; others, like Bon Celine, bloom easily, and are valuable in the bud, but worthless when open. He thought Mr. Tailby's rose more double than some of the free-blooming kinds.

John G. Barker, chairman of the Flower Committee, had visited Mr. Tailby's place during the week for the purpose of examining this rose, and found it evidently a very prolific variety. Though it is generally less thorny than the Isabella Sprunt, the back of the leaf has some thorns. It has more buds, and the buds are

longer and have more substance than those of the Isabella Sprunt. One florist pays Mr. Tailby two dollars per hundred more for buds of this variety than for other kinds.

The discussion was here interrupted by the fall of one of the Paddock elms, which the society had in vain endeavored to save, the members rising to witness the fall of the first of the veterans. The president, as chairman of the committee to confer with the committee of the City Council on Parks and Grounds, and protest in the name of the society against their removal, made an informal report that the committee had attended to that duty, and presented the strongest arguments in favor of saving the trees, but without effect. Marshall P. Wilder, who also appeared before the committee of the City Council to protest against the removal of the trees, said that the committee of the society did their best to save them, but he was thankful that there were still some left in the sacred enclosure opposite. C. M. Hovey thought the removal of the trees was not an unmixed evil, but in his opinion there might have been five or six of the best spared. He disliked to see trees destroyed, but thought that in cities they often, in narrow streets, disfigured buildings. Many of those in the burying-ground opposite should be removed as many had been at Mount Auburn.

Marshall P. Wilder could see little difference between the buds of Mr. Tailby's rose and those of the Isabella Sprunt, but did not wish to be understood as detracting from the merit of the former. He had been much struck by the character of the foliage of the Tailby rose, as well as by its thornlessness.

Mr. Barker remarked that the color of the Isabella Sprunt was a little darker than that of the sport.

Mr. Hovey said that sports generally differed but little in habit from the parent, and that in this the difference was greater in the foliage than in the flowers.

Mr. Tailby said that all the buds had been longer than those of Isabella Sprunt. It is more prolific than the Yellow Tea, and, he thought, quite as beautiful. The florists prefer the color to that of the Isabella Sprunt. He first noticed the difference in the foliage and buds when round clipping buds. Many sports doubtless occur which remain unnoticed.

Mr. Rand read from the "Gardeners' Monthly," for May, 1865, Vol. VII, p. 144, the following account of the origin of the Isabella Sprunt: —

"The new rose advertised by Mr. Buchanan in this number, the Catherine Sprunt, is not a seedling from, but a sport of Safrano, which originated some years ago in the garden of the Rev. James Sprunt, of Kenansville, North Carolina, a rare lover of roses, and a keen observer of all their peculiarities. He discovered a branch on his Safrano rose that, instead of the usual orange tint of Safrano, had flowers of a pure canary yellow. He propagated from this branch, and the truly valuable variety, Catherine Sprunt, as we saw it with the raiser, is the result."

In a note published in the same journal for January, 1866, Vol. VIII, p. 21, Mr. Sprunt, speaking of the article above quoted, says: —

"And here I would observe that, in the article to which I have referred, you give a correct statement of the origin of Buchanan's *Isabella* (not *Catherine*, as he had it) Sprunt."

Mr. Wilder remarked on the permanence of sports; he had found those of the camellia quite as permanent as the original varieties. There is a strong tendency to sport in hybrids. In answer to a question as to what constitutes a sport, he pointed to a rose bush on the table bearing several red roses, and said that if that bush should produce a white rose, it would be what is called by florists a "sport." The Abby Wilder camellia, a white variety, is remarkable for its propensity to sport. It has given a dark flesh-colored variety, a clear rose, and a flesh-color with distinct stripes. The first, which was dedicated to a daughter, Grace Sherwin Wilder, has not departed from the type for twelve or fifteen years; the second is called Abby Tryphosa. Two days before he took off two grafts from the striped kind to perpetuate it. Mr. Hovey's Anna Maria Hovey has, with Mr. Wilder, always brought a flesh-colored flower.

Mr. Hovey said that the subject of sports is an extremely interesting one. There is a variety of the Safrano rose known as Safrano à Fleurs Rouge. He read a notice from the "Gardeners' Chronicle" of experiments by M. Zanone Zen, of Venice, in producing new varieties of roses by grafting on different stocks. Mr.

Hovey believed that many of our varieties are produced from sports, but he felt very doubtful whether the views expressed in the article read are correct. Mr. Hovey referred to the striped varieties of pears, such as Verte longue, Beurre d'Amanlis, Louise Bonne of Jersey, etc., the Achyranthes, and the variegated Azaleas, as instances of sports. In regard to camellias, he said that he could not fix the colors of Mrs. Anne Maria Hovey by grafting, and felt quite sure that Col. Wilder's plant will sport sooner or later. His own plants vary extremely — white, with one quarter red, the outside pink with white centre, or outside white with pink centre. Among a hundred and fifty large plants he had never failed to see the white appear in the rose sooner or later. It was quite remarkable that two white sports of the *Bouvardia*, *Vreelandi* and *Davidsonii*, should appear at the same time. The sports of azaleas might or might not be permanent. Our collections would be much richer, if all the old cultivators had noticed and perpetuated sports. All persons, when assorting their seedlings, evergreen and others, should notice variations and perpetuate such as may be worthy.

President Strong felt the same doubt as Mr. Hovey in regard to the possibility of producing sports by grafting, to the extent alleged in the paragraph quoted from the "Gardeners' Chronicle," but, at the same time, believed that some effect might be produced in that way. Most of our grafted roses are on the same stock, the Manetti, and he thought that if a rose were grafted on a stock of different color, the Baronne Prevost for instance on Caroline Sansal, the color might be affected. The stock certainly does in some cases affect the scion, *Abutilon vexillarium* becoming permanently mottled when grafted on *A. Thompsoni*. This may be true of other plants, and the whole subject offers a fruitful field for experiment.

Mr. Tailby spoke of a graft of *Abutilon Thompsoni*, on the common species, which he had seen at Mr. Hunnewell's, in which the stock had been so much influenced by the graft, as to throw out a variegated shoot below the point of junction.

Mr. Hovey said that in one of the scientific discussions of the London Horticultural Society it was remarked that no scion would change the stock but the abutilon. He repeated his belief that varieties could not be produced at will. All analogy is against it. The Baldwin apple has been grafted millions of times, without

changing its character. So with the Bartlett pear. All our stocks are not crabs. He had himself sown for stocks the seeds of improved kinds, which would certainly run into varieties, and grafted the Bartlett and other pears on them, but no variation was produced. He believed it to be a law of nature that variations should not be caused by grafting, else our fruits would all come to we know not what.

President Strong remarked that William Gray, Jr., had on exhibition a plant of *Polemonium cœruleum var.*, and inquired as to its value.

E. S. Rand, Jr., in the absence of Mr. Gray, stated that Mr. Gray had found it perfectly worthless; the sun burns it all up.

President Strong said it was very valuable as a bedding plant in England, and he hoped it might prove valuable in shady situations here.

Mr. Barker said that Mr. Gray had a fine stock which was nearly all eaten up by snails.

Mr. Wilder exhibited the *Bougainvillea spectabilis*, which had bloomed with him every year, and *B. glabra*, of which he had a large plant which did not bloom so freely. In answer to Mr. Wilder's inquiry, Mr. Rand stated that *B. lateritia* is a variety of *spectabilis*. Mr. Wilder also showed a flower of *Magnolia Lenne*, of a dark maroon color outside, and white inside. It is a hardy variety.

Mr. Rand exhibited a flower of *Tacsonia Van Volxemi*, a genus closely allied to *Passiflora*, indeed running into it, so that it is difficult to assign some species with certainty to either. This species is distinct and of very rapid growth, a very free bloomer, producing a flower at every leaf; the flowers are bright red, with very long and slender stems, and, when hanging from the rafters of the greenhouse, with the sun shining through them, the effect is remarkably elegant. It is not a stove plant, a temperature of fifty or even forty-five degrees at night being sufficient. Mr. Rand's plant was set out a year ago; it does not flower until it has attained some age; the flower lasts three days. This plant is probably grafted on the common *Passiflora*. All the *Tacsonias*

are covered, when in growth, with light-colored, clean foliage, some a little downy. A spurious species has been sent out under this name.

Mr. Hovey had on exhibition a flower of *Iberis Gibraltarica*. This species has a very large flower, and Mr. Hovey said it would probably be a very valuable plant for the florist; he thought it could be calculated on to cut from all winter.

The president reminded members that there would be a business meeting next Saturday, and that it would also be prize day for greenhouse plants, etc.

BUSINESS MEETING.

SATURDAY, March 7, 1874.

An adjourned meeting of the society was holden at 11 o'clock, President STRONG in the chair.

EUGENE A. SNOW, of Melrose, was elected to membership.

Meeting dissolved.

MEETING FOR DISCUSSION.

James Comley, having on exhibition a plant of the new *Aralia Veitchii*, was called on for information concerning it. Mr. Comley said that he saw it in England at the nursery of Messrs. Veitch, who introduced it from New Caledonia a few years ago. Mr. Veitch stated that he had found it extremely difficult of propagation, and offered to give Mr. Comley five guineas each for the plants, if he should be more successful in propagating it. Mr. Veitch's original plant was but ten inches high, though it had been in his collection for four years, as it grows very slowly in England, and the plant also appeared to have been cut down for propagation. It had taken the first prize as a new ornamental plant wherever exhibited. Mr. Comley had found it a more rapid grower here than in England. It is a stove plant, and propagated by cuttings.

Edward S. Rand, Jr., said this is one of the tropical *Aralias*. Some of the species are hardy, *A. spinosa* (Hercules' Club), a

native of the middle States, being grown in gardens in Massachusetts. All the species have very large pith, that of *A. papyrifera* producing the "rice paper" of the Chinese. The latter species may be grown as a bedding plant, with the protection of a cellar in the winter; and in England and the middle States it is quite hardy. Many other species might be grown here in the same manner. *A. canescens* (sometimes called *A. Japonica*, which latter is a tender evergreen species), is one of our most showy plants, hardy, and produces foliage like immense fronds of fern.

President Strong remarked that it is very strange the *A. Veitchii* should be so much slower of growth in England than here. He mentioned a fine new rose, Carl Coers, exhibited by him for the first time, and called on the younger members of the society to take part in the discussions, remarking, that they had, perhaps, been too much confined to the wheel-horses, and he wished the leaders to do their share.

Mr. Rand spoke of a plant of *Cœlogyne cristata*, which he had on exhibition. The specific name is derived from the hairy crest upon the lip. It is one of the most valuable species for general cultivation by gardeners. It is not a new idea to grow it for cut flowers. Mr. Such and Mr. Menand having grown it for this purpose for many years, the spikes selling for from two to three dollars each. The plant on exhibition is a little late in flowering, the usual time being from about Thanksgiving to the first of May. The species is a native of Nepal, growing in close, sandy loam by watercourses, but is sometimes found on trees; it should, therefore, be grown in loam of the same character, and have plenty of water. It is easily propagated by division of the pseudobulbs, and flowers in profusion. The plants are yet somewhat scarce in this country. Mr. Such has a large plant two feet in diameter. One grower in England has a house one hundred feet long filled with these plants, which are used for cutting. The flower keeps from two to five weeks, and can be commended as a valuable plant for gardeners.

Mr. Rand also exhibited *Zygopetalum* (yoke-petal) *Gautieri*, a new and rare species from Brazil. Most of the *Zygopetalums* bloom in autumn, but this species flowers in spring. It is not richly colored, but its markings are beautiful, and it is delightfully fragrant. It is figured in "L'Illustration Horticole."

Marshall P. Wilder referred to the record in the "New England Farmer" (Vol. 15, p. 406) of the exhibition by him on the 24th of June, 1837, of a specimen of *Oncidium flexuosum*, which had been in bloom more than four weeks, with a stalk twenty-seven inches in length, and at one time ninety-seven fully expanded blossoms, as corroborating the statements made in previous discussions as to the early cultivation of orchids in this vicinity.

Charles M. Hovey referred to the remarks of Mr. Rand and himself on *Bletias* and *Dendrobiums* a few weeks since, and said that orchids were early cultivated by Messrs. Lowell, Boott, Wilder and Cushing. Notwithstanding our zeal in horticulture, we had failed to bring up the taste for the cultivation of rare orchids to that of the city of Albany, our citizens being satisfied with smilax, tea roses, and carnations. Though Mr. Such may get two or three dollars a spike for *Cœlogyne cristata*, they would remain unsold here at that price; but eventually a taste for such flowers may be formed. The *Cœlogyne* appears to be easily cultivated.

President Strong doubted whether Mr. Hovey was quite correct in his strictures on the taste for flowers in Boston, and if he were, perhaps the reason is that we have supplied the market only with rosebuds, etc. Though the orchids may not bring two or three dollars a spike, he thought they would command remunerative prices. He believed these discussions would tend to create a taste for better things, and we should hope for and expect them.

Mr. Hovey spoke of a flower of *Phaius Wallichiana*, exhibited by Mr. Rand. The plant is a more delicate grower than *P. grandifolius* and more difficult of cultivation, requiring more heat.

Mr. Rand said the *P. Wallichiana* was a very free grower, making a tall, reedy plant, and a very free bloomer, — not as free as the other species, but every pseudobulb may be expected to produce a flower spike.

Mr. Wilder called upon the Rev. A. B. Muzzey as having taken an early interest in the society, and being imbued with a love of nature.

Mr. Muzzey said that he was but a young cultivator, and he supposed these discussions were not intended for such. He spoke of the distinction between wild and cultivated flowers as artificial. He was one of the earliest members of the society, and after being out of the State for several years, he had renewed his con-

nection, and had been admiring the progress made by our gardeners. He said we do not come here to make set speeches, but should speak, as Webster used to say, "right onward." He counselled the florists not to be discouraged, though they had to carry their flowers home, as he knew to be the case with one grower, but to reduce the price of their flowers, and, though it might be humiliating, to find a customer at his own price, if they could not at their own.

President Strong thought Mr. Muzzey had touched on a very important point — the question how to bring flowers within the reach of all.

A. P. Calder, who had been remarkably successful in forcing the Lily of the Valley, was called upon to give his method. He said that he commenced to force this flower because he found it necessary in making up his work at the store. It has been considered very difficult to force. There are two very important points, — plenty of bottom heat and plenty of moisture. After the flower has formed, the plants must be kept very cool and have no water. No water must touch the leaf or flower after the flowers have two-thirds developed. Too much water rots not only the flower stems but the leaves. He sold two hundred selected clumps to a gentleman who allowed them to get dry, and they grew only two inches high. Mr. Calder had gathered two hundred sprays per day since the first of the year. On New-Year's day he plucked forty-eight dozen.

In answer to an inquiry as to the soil used, he said that his soil was not particularly prepared, he took common loam from the field. It requires a very strong bottom heat to start it; afterwards it is easily grown. He has five pipes under the bench, which give a strong bottom heat. His plants are placed in boxes. Clumps from the same box, without bottom heat, did not grow at all.

Mr. Rand, in answer to an inquiry concerning the rose-colored variety, said that he had six or eight kinds, and that, as regards the flowers, the common is the best of all. The so-called rose-colored variety is a dirty pink. Some of the variegated foliaged kinds, especially the golden-variegated, are valuable.

Mr. Calder said, in reply to the question whether the lily of the valley succeeds best in the sun or shade, that out-doors it grows in the sun, and in-doors his best plants are in a stove-house, with seventeen pipes, and exposed to the hottest sun.

Mr. Hovey said the impression that it requires shade, arises from the fact that we have seen it grow generally in shady borders. The name shows that it likes moisture, but it wants dryness also; the leaves dry away late in the season. It is said that the flowering bulbs can be distinguished by the size; if the roots are taken indiscriminately, not more than fifteen out of a hundred will flower. He had put the roots in moss in a pot and placed on a flue, with an inverted flower pot filled with moss over them, which was removed in ten or fifteen days. These roots of Mr. Calder were imported roots, in clumps, and were very beautiful; others, in single roots, were more difficult to force. Few have so favorable a situation as Mr Calder. Mr. Hovey potted several boxes and placed in heat, and when they began to grow he told his gardener to carry them out, and they failed; they must not be taken from heat too soon.

James O'Brien asked whether any soil is necessary; he had seen them in New York in sand and moss.

Mr. Calder replied that the only soil he had used, other than what came on the clumps, was a little in the box and between the clumps; it is not necessary to put in soil. The object of withholding water is to keep the blooms clean and white; the smallest quantity of water spots them. He does not give them a particle of liquid manure.

President Strong. The lily of the valley will absorb a great quantity of food. Mr. Calder's clumps are better than we get at home. The Dutch cultivators use a great amount of cow manure.

Mr. Calder did not think that when forcing they would take in liquid manure, but they will take all you will give them while forming the flower buds.

James Cartwright, who had on exhibition an uncommonly vigorous plant of *Dendrobium nobile*, said it was grown in the shade among roses; it had an abundant shower bath four or five times a day, which was the whole secret of its vigor. It was kept growing until October; if it had been dried off in August the flowers would have been much more abundant, — another year they will be. It has a good deal of good wood and a good young growth, and an abundance of flowers may be anticipated.

Mr. Rand said that if dried off earlier it would have had ten times as much bloom; the plant should have been covered with

flowers. It was a very fine plant, especially considering its age — about four years.

Mr. Cartwright said the plant was never wholly dried off; he did not put water in the pot, but sprinkled a little over the plant every day.

MEETING FOR DISCUSSION.

Saturday, March 14, 1874.

Edward S. Rand, Jr., exhibited a spike of flowers of *Phaius grandifolius*, and a flowering plant of *Bletia hyacinthina*, to show the difference between the two species, the former having until recently been classed as a *Bletia*. The generic difference is stated by Lindley (Genera and Species of Orchidaceous Plants, p. 126) as follows: — "From *Bletia*, this genus [*Phaius*] is distinguished by the labellum being constantly connate with the base of the column and spurred, while in *Bletia* the labellum is constantly articulated with the column and never spurred."

Marshall P. Wilder said that Mr Rand had misunderstood his remarks on a previous occasion. He did not doubt that *Phaius* was properly separated from *Bletia*, but felt an attachment to old things and old names.

Mr. Rand, in reply to an inquiry from C. M. Hovey, said that he believed *Bletia Shepherdii* was not at present in this country.

Mr. Hovey said that he had a plant under that name, and asked whether it would flower from the base or summit of the pseudobulb. Mr. Rand replied that it would probably send out its flower stem from the summit of the pseudobulb, as he knew of no *Bletia* flowering from the base, but he could not speak positively, for among the *Epidendrums* there is a single species, *Stamfordianum*, flowering from the base, while all the others flower from the summit, and possibly there may be a similar exception among the *Bletias*.

Mr. Rand exhibited a flowering plant of *Cypripedium Harrisianum*, a hybrid raised by Mr. Dominy, gardener to Messrs. Veitch, by applying the pollen of *C. barbatum* to the stigma of *C. villosum*. It partakes of the character of both those species, the leaves having the markings of those of the former and the length of those

of the latter, while the flower is also intermediate in character. This was the first seedling orchid ever raised, the organs having been imperfectly understood, and it not being known that they could only be fertilized by violence. With ninety-nine orchids out of a hundred self-fertilization is impossible.

Mr. Hovey remarked that Mr. Dominy had raised other hybrid orchids, some of which were very curious, and also a hybrid between *Lapageria* and *Philesia*. The difficulty in hybridizing orchids is that the pollen is in waxy masses, instead of fine grains as in most flowers. Some orchids, such as our native *Cypripediums*, fertilize themselves easily. At Marion, Mr. Hovey found many seed pods, which he gathered. There are other plants which, when wild, are fertilized with difficulty, but when under cultivation are very easily impregnated, of which *Lilium Pennsylvanicum* is an example. A species of lily was very scarce, but one cultivator in Germany always had plenty of bulbs raised from seed. His secret was cutting off the flower stems the moment the flowers appeared, and hanging them up in the house. *Lilium lancifolium* makes plenty of seed. Mr. Hovey thought he could sometimes have gathered a quart of pods from a bed, while the tiger lily never seeds, though there is no apparent defect in the organs of fructification; the bulblets, which form in the axils of the leaves, appear to take the strength of the plant. Mr. Hovey had also found *Cobœa scandens* to seed abundantly by artificial hybridizing, but it required a high temperature and dry air.

Mr. Rand expressed very grave doubts of the self-fertilization of our native *Cypripediums*, and still stronger doubts of the possibility of a lily's perfecting its seed when the flower stalk is cut off and hung up in the house, as soon as the flower appeared.

Marshall P. Wilder said, that in view of the occasion about to transpire at Faneuil Hall, in half an hour, — the meeting in honor of Charles Sumner, — with the city in a state of mourning, this was not the time to continue our discussions. He moved, therefore, that out of respect to the memory of Charles Sumner, and also of Millard Fillmore, both of whom were honorary members of the society, the meeting adjourn, which it accordingly did.

MEETING FOR DISCUSSION.

Saturday, March 21, 1874.

Dr. G. F. Waters, having received some seeds of the Australian *Eucalyptus globulus*, inquired as to the character and cultivation of the tree.

Marshall P. Wilder replied that he saw the tree growing in California. It is the tallest tree in the world, growing in Australia, its native country, to the height of four hundred and eighty feet. A section of a tree two hundred and fifty feet high was cut down in Australia and sent to California as a specimen. Though taller than the *Sequoia*, the trunk is not as large. He saw one tree in California which had made a shoot fifteen feet in length in a single season. In that State it has been planted by the fifty acres for timber. There are several species of the *Eucalyptus*, but this is the one most generally grown in California.

Charles M. Hovey said there has been a great deal of discussion on this tree in the "Gardeners' Chronicle" and other journals. It is said to be one of the most powerful antidotes to malaria. He thought it probable that the beneficial effect might be produced by the odor which emanates from it, as we find the delightful fragrance of our own pine woods is beneficial to weak lungs. It would not be hardy here. Australian trees, generally, are tender in this latitude. In Louisiana it might be valuable for planting in the swamps, and covering barren places, and also in the other southern States. The timber is not of remarkable quality.

Robert Manning said he had read some of the notices of the miasma destroying properties of the *Eucalyptus*, referred to by Mr. Hovey, but the latest notices he had seen doubted whether it possessed this property in a greater degree than any other fast growing tree.

Edward S. Rand, Jr., confirmed Mr. Manning's statement, and added, that he had a tree planted in his vinery border which made a growth of six or eight feet in a season. The leaves are of a silvery hue, and when played on by the wind, the effect is very beautiful. There is also a plant at the Botanic Garden, in Cambridge, which has grown so tall as to crowd against the roof of the house. The tree is extraordinarily odoriferous, with a peculiar

and penetrating fragrance. There are six species of *Eucalyptus* figured in Hooker's "Flora Tasmania"; the *globulus*, however, is not among them.

Marshall P. Wilder presented a small plant, in flower, of *Azalea mollis*, a new Japan species, var. Isabelle Van Houtte. The plant was imported only a few months since from M. Van Houtte, who raised it from seed sent him from Japan, and who says that it is perfectly hardy. The flowers are as large as those of the rhododendron, and borne in clusters from six to eight inches in diameter, and are of a nankeen color, spotted with orange. The plant exhibited produced a cluster of ten flowers. It is figured by Siebold and Zuccarini, and in Regel's "Gartenflora," and it is hoped will prove a hardy and valuable acquisition.

Mr. Hovey said he was glad to see this representative of a new family. Already hybrids have been produced from it, and, as with *A. Pontica*, this will be its chief value, unless it shall prove hardy. The flowers will probably be larger on a strong plant. *Pontica* is hardy in the wood, but not in the bud. The *Azaleas* are like the *Rhododendrons*, some of which, *R. arboreum*, for instance, are greenhouse plants, while our American species, *maximum* and *Catawbiense*, are quite hardy, the former growing as far north as New Hampshire. European cultivators, who wished to produce more brilliant colors, have hybridized with the Himalayan species, which are as tender as heliotropes, Mr. Hovey having left out some plants of *R. Dalhousiæ*, which were destroyed by a frost that did not injure heliotropes. We must find out what species are hardy, and so of this azalea; if it proves hardy, it will be an acquisition to our gardens; but, if only as hardy as *Pontica*, it will be valuable for hybridizing. *Azalea amœna* is a species which has not had proper attention. Mr. Hunnewell has had it planted out three years; and, though it has not bloomed, the plant appears to be hardy.

Mr. Hovey exhibited the flower of a hybrid between the Azalea and Rhododendron, one of eight or ten which he imported from Henderson several years ago. It is very profuse in blooming, and forces well, though it is of rather a scrawny habit, and requires care to make a well formed bush. The foliage is evergreen and halfway between that of the azalea and rhododendron.

The President inquired what conclusive evidence Mr. Hovey had that it is a hybrid.

Mr. Hovey replied that it is evergreen, and has every appearance of a small-leafed rhododendron; the buds have a scaly look like those of the rhododendron, and have not a capsule like azaleas. He thought Mr. Loudon was right in classing the azaleas as a section of the rhododendrons, the only difference being that the azalea has five stamens and the rhododendron ten, and the former is deciduous, while the latter is evergreen. In the same way the geraniums and pelargoniums, which were formerly classed as separate genera, are in England now generally spoken of as one.

Mr. Hovey referred to the "sports," which were a subject of discussion on a former occasion. He had on exhibition to-day blooms of his seedling camellias, with a red flower on the end of the shoot, and a white flower within an inch of it. As a general thing sports do not go back, the striped pears for example; but Mrs. Pollock geranium does. He had red and white flowers back to back, and had found no limit to the variations, and had paintings made of several of the most striking.

Mr. Wilder wished Mr. Hovey would mark a self-colored flower and graft from the shoot bearing it. His position was that self-colored sports are always preserved by grafting, and are permanent.

Mr. Hovey said that he had tried the experiment, and had only one plant that had not sported; sooner or later they all break.

Mr. Wilder said the plant of Anna Maria Hovey, which he had from Mr. Hovey, always produces a self-colored, pinkish flower. Striped flowers will sport from their inherent quality.

Mr. Hovey said the original plant of the variety mentioned by Mr. Wilder has this year produced two flowers back to back; one white, the other red. The top was inarched off and propagated indiscriminately. He agreed with Mr. Wilder as to the general rule of sports. The exceptions are few and mostly among the azaleas; but this camellia is also an exception.

John B. Moore here exhibited three azaleas, white, rose-colored, and white tinged with rose, all taken from one plant.

Mr. Wilder said he had an azalea with two-thirds of the lower part of the bush white, and a shoot from the centre bright lilac. He noticed this sport and cut away the lower part of the plant, and it had become permanent. The *Azalea Wilderi*, which is white, with rarely a little stripe of pink, has a large branch of a sport which is clear pink, and has retained this color for many years.

Mr. Hovey referred to *Azalea Lorely*, a white, faintly striped with pink, but upon which a branch came entirely pink. The azaleas have been so fertilized back and forth, that they have become like *Abutilon Thompsoni;* the blood has finally got so mixed that it is impossible to rely on the character of seedlings. The *Coleus Chameleon* is apt to revert to the green state, but, by pinching off the top and causing it to break out, the colors may be produced.

Mr. Rand here exhibited a plant of *Vanda cœrulescens*, a late discovery, and one of the rarest orchids. Colored drawings had been sent to Europe, but the existence of such a flower was doubted on account of the extraordinary color, which is quite new among orchids, a deep violet lip, with blue petals. It was received by Mr. Rand from Messrs. Hugh Low & Co., in place of *V. cœrulea*, which he had ordered, though *V. cœrulescens* was not in their catalogue. It seems a free bloomer, and will doubtless be valuable. Mr. Rand also showed a flower of *V. tricolor*, of which he had a plant with thirty-nine expanded flowers. The fragrance is so powerful that a single flower will scent a room. The flower would be just as good a month hence as now.

Other new plants exhibited by Mr. Rand were *Dendrobium Japonicum*, one of the hardiest orchids, on a piece of the stem of a tree fern, where it had probably grown from a seed accidentally deposited there; the flowers are dazzling white, lasting three or four weeks, and are deliciously fragrant in the evening, — *Epidendrum macrochilum roseum*, (*atropurpureum*), also very fragrant, and remarkable for its color, most of the *Epidendrums* being of a dirty white, — and a cut flower of *Tacsonia Buchanani*, from South America, of a brilliant scarlet, producing a perfectly dazzling effect, and very easily grown, but only lasting a day.

Mr. Hovey brought up the Amaryllis again, remarking that though a fine bouquet of these and other flowers was exhibited by Mrs. C. S. Wood, and seedlings by Francis Putnam, the growers could hardly, yet, have taken the hint which he gave a few weeks ago. He hoped that they would be tried in the open air, as Mr. Putnam intends to do.

Mr. Putnam being called on by the President for his method of cultivating the amaryllis, replied that it differed from that of other

growers who had spoken heretofore on the subject. He does not let them dry up, but waters continuously, and thinks his seedlings flower sooner under this treatment. He believes they can be cultivated out-doors. If inclined to dry up, he lets them. He keeps his old bulbs growing all the time, and they increase in size.

Mr. Hovey thought that amaryllis bulbs had been injured by taking out of the pot. Unlike those of other bulbs, the roots are fleshy; the bulbs should be put in a box with earth over them, and the box placed on the ground; if placed on a board, they will be injured by drying, but not if covered with earth. The case is the same with caladiums. In Belgium the amaryllis succeeds out-doors with a few leaves over them in winter. They can be planted out in a warm border.

Mr. Putnam had one amaryllis which he kept in a pot three years, and it remained dormant without shrivelling. He planted it out-doors and it grew.

Mr. Hovey said that John Richardson, of Dorchester, had a bulb for twenty years without flowering. It was a striped-leafed variety of *A. reticulata*, an autumn flowering kind. He gave it to Mr. Hovey, and soon after it threw up a flower stem. It had been kept too warm.

Mr. Hovey went on to speak of geraniums and pelargoniums, especially the zonale class, which is one of much interest, and one to which much attention is paid in Europe. Mr. Gray has one hundred varieties. Mr. Hovey had himself raised some from seed, and he mentioned the subject now to induce cultivators to raise seedlings. Mr. Denny, one of the most extensive English cultivators, has brought out six or seven kinds; he has a large house which he fills with seedlings every year. Mr. Hovey exhibited a seedling of his own, selected as one of the best out of two hundred. He hoped we should originate fine varieties hereafter and not be dependent upon English and German cultivators. Both Colonel Wilder and himself had done something for the pelargonium.

H. W. Fuller, chairman of the Garden Committee, said he had lately visited the greenhouse of William Gray, Jr., where he saw a great number of geraniums in bloom, producing a charming and brilliant effect. One variety, the *Bride*, of great purity and beauty, attracted immediate attention, and the *E. S. Dodwell*, *Master Christine*, *Polly King*, *Madame Werle*, *Mons. Eugène Buen-*

zod, and *Delight*, were admirable. For foliage, the *Earl of Roslin*, *Reine Victoria*, *Emperor of Brazil*, and *Marshal McMahon*, among the bronzes, were extremely fine. As a general rule, he thought the bronzes, as well as the gold and silver tricolors, were more valuable for in-door planting than for bedding out. The *Moor* and the *Harold*, however, are exceptions, doing much better out of the house. Of the *golden* tricolors, the most valuable in Mr. Gray's collection were the *Achievement*, *Lady Cullum*, *Mrs. Turner*, *Macbeth*, *Florence*, *Howarth Ashton*, *Mrs. Grieve*, *Mr. Grieve*, *Ealing Rival*, and *Miss Goring*. Of the *silver* tricolors, *Lass o' Gowrie*, *Lady Dorothy Neville*, *Clorinda*, *Mrs. Wilkinson* and *Eva Fish*, were the most beautiful, *Mrs. Clutton* and *Mabel Morris* being still great favorites. However, the *Crystal Palace Gem*, for bedding, remains unsurpassed.

Many other varieties heretofore recommended in our reports, for common use, are almost indispensable. This class of plants has become so important in gardening for effect, that he was truly glad to have the public attention called to it. Although many of the new importations have proved worthless, yet many of those lately introduced have added greatly to our flora. The President suggested the Beauty of Calderdale as a bronze variety, which holds its own, and is valuable for bedding, and remarked that he valued the bronzes above the gold and silver tricolors. Mr. Fuller concurred with the President, and was surprised that the bronzes were not more generally planted.

MEETING FOR DISCUSSION.

Saturday, March 28, 1874.

In response to the call of the president, John G. Barker, chairman of the Flower Committee, pointed to some fine trusses of geraniums exhibited by William Gray, Jr., and said that a few days previously he had the pleasure of a visit to Mr. Gray's place, and found the show of these flowers truly magnificent. There were in the house about a hundred and twenty plants, in eight or nine-inch pots, and each one a specimen in itself, — all of dwarf habit, short-jointed, and covered with healthy foliage, — no yellow

leaves or bare stems to be seen. The kinds exhibited were chosen for the beauty of their flowers, and were not the best for bedding purposes. Mr. Gray's golden and silver tricolors were grown in smaller pots than usual, and the colors were finely brought out. All the pots were plunged in spent hops, and the temperature by day was allowed to rise to 70,° while the sun shone, care being taken to give abundant ventilation, but fell to about 45° at night, affording exactly the conditions under which geraniums thrive best. On entering the door the whole scene is before you, and Mr. Barker had never seen anything equal to it at this season of the year.

Charles M. Hovey said the geranium luxuriates in a hot sun by day, with a low night temperature, and requires plenty of air. The English catalogues give two classes; one for flowering in pots, and one for bedding; both of tricolors and bicolors, though some are adapted for both purposes. The English appreciate the zonale pelargonium as a winter bloomer.

Some discussion occurred here between Mr. Hovey and Mr. Barker as to the best form of house for pelargoniums, Mr. Hovey maintaining that a lean-to was required to grow them in perfection, while Mr. Barker hoped the impression would not go out that they could not be grown quite as well on a flat stage.

Edward S. Rand, Jr., had on exhibition a plant of *Dendrobium macrophyllum giganteum* (*superbum*). Mr. Rand remarked that this was a rare East Indian species, which has generally been considered difficult to flower. It blooms only on the strongest shoots.

Mr Rand also called attention to the Azalea Souvenir de Prince Albert, exhibited by William Gray, Jr., as, though not one of the newest, one of the best varieties, the flowers being very persistent, and to the rose Baronne Rothschild, exhibited by James Comley, as very fine and worthy of cultivation.

Mr. Rand added, in regard to the subject previously under discussion, that the scarlet geranium is one of the best window plants, provided the room is not kept too warm. He has them brought into the house from time to time, a plant remaining in bloom for about six weeks.

The President wished gentlemen to understand that they are not limited to specimens exhibited, but that any subject connected with our art is in order.

Mr. Rand remarked on the improvement in the means of communication as shown by a sale which he had witnessed this morning of 8,000 bulbs of *Lilium auratum* for nineteen cents each. Only a few years ago he paid twenty dollars for a single bulb.

Mr. Hovey said the wonder to him is where all these lilies come from. Our native lilies could not be found in such quantities. He thought nineteen cents a high price, considering the bad order they frequently come in. He imported three bulbs from Messrs. Veitch, soon after its introduction, and they gradually grew smaller, until he had not one left. Mr. Wilder also had a plant with ten or twelve flowers one year, and the next year not any. It seems to be very fastidious about its soil. On Long Island it succeeds and is grown extensively. It should be planted in light soil. He thought that the beautiful varieties of *L. speciosum* has been too much neglected for *L. auratum*.

Mr. Rand, who has been very successful in cultivating *L. auratum*, said that he merely covered his bed with pine needles — not enough to keep out the frost, — and they grew stronger year after year. His soil is light and sandy.

Francis Putnam being inquired of as to his success in growing *L. auratum*, answered that he had lost a good many; he had one with nineteen buds on it, which died away in two days, and on digging it up found the bulb rotten. His soil is of medium character, neither very light nor very heavy. He had some in soil where the water stood, which survived. *L. Japonicum* had succeeded within ten feet of where *L. auratum* had totally failed.

Mr. Hovey planted eight or ten bulbs of *L. auratum* to fill up the gaps in a row of *L. Japonicum*, and they came up and grew rapidly for a short time, and then turned yellow. The soil in which the imported bulbs are packed is very sandy and yellow.

James O'Brien bought bulbs of *L. auratum* three years ago, started them in pots, and planted out a dozen in a heavy, mucky soil. They flowered very finely, the individual flowers being very large and fine.

Mr. Hovey said he had no doubt there is an inherent tendency to rot in the imported bulbs, when planted here. He had a bulb of *L. speciosum* which had twenty-four flowers on it, and for which he paid five guineas; after producing seed the bulb dwindled for five years, decaying and the scales breaking off, until it finally

disappeared. Imported bulbs get heated and rot; they should be grown here, by which means we may get a healthy, hardy bulb.

Mr. Rand being asked how deep he planted his *auratums*, answered, eight or nine inches, deeper than most bulbs, and gave a little top-dressing at the time of planting.

E. W. Buswell alluded to a remarkable hybrid lily exhibited by Messrs. Hovey a few years since, and asked how it was produced.

Mr. Hovey said the history of this hybrid would show how easy it is to make a break in any well known plant. Francis Parkman exhibited a very fine specimen of *L. auratum*, from which Mr. Hovey secured a stamen, believing that he had plants of *L. speciosum* in bloom which he could fertilize from the stamen, but finding them all out of bloom, he gave it to his nephew, John C. Hovey, who had some in bloom. The result was a lily as large as *auratum*, and of the same shape as *speciosum*, but he has not succeeded in propagating it extensively enough to put it on the market. Out of ten seedlings, but one was of this remarkable character. The pollen was kept several days. Mr. Hovey said that he had kept lily and other pollen for several weeks, and now has some pæony pollen which has been kept two years, and which he intends to use. He would like to have the question tested, how long pollen will retain its fertilizing power.*

Marshall P. Wilder said that the longest time he had ever kept pollen was three weeks. He had a Japan lily coming into bloom, and nothing to fertilize it with, and saved some tiger lily pollen, and after keeping it three weeks, produced by means of it his first lot of seedlings. He always carries a camel's hair pencil in his pocket to use in transferring pollen, and had fertilized a lily from pollen which had remained in the brush for some days.

The President announced that this would close the series of meetings for discussion, for the present, as members of the society generally, would be fully occupied in their grounds; but he hoped that, after the pressure of spring work was over, the discussions might be resumed, as subjects are from time to time presented.

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* In the "Revue Horticole" for 1873, p. 245, may be found a record of the successful fertilization of *Ceratozamia Mexicana*, by M. Houllet, in 1872, with pollen which he gathered in the hot-houses of the Museum, in 1867. — Ed.

TRANSACTIONS

OF THE

Massachusetts Horticultural Society.

FOR THE YEAR 1874.

PART II.

BOSTON:
TOLMAN & WHITE, PRINTERS, 221 WASHINGTON STREET.
1875.

TRANSACTIONS

OF THE

Massachusetts Horticultural Society.

BUSINESS MEETING.

SATURDAY, April 4, 1874.

A duly notified stated meeting was holden at 11 o'clock, President STRONG in the chair.

The following named persons being nominated to the society by the Executive Committee, were elected to membership:

JOHN J. SHAUGHNESSY, of Boston,
MRS. LYDIA B. MANNING, of Reading,
JAMES CARTWRIGHT, of Wellesley,
THOMAS TAPPAN, of Canton.

The decease of Robert Morris Copeland being announced to the society, the following resolutions were adopted:—

Resolved, That in the decease of Mr. R. Morris Copeland, a life member of this society, we mourn the loss of one who by his active labors has done much to encourage a taste for rural adornment, and to advance the science of landscape gardening; that his love for the beautiful in the trees and shrubs of our country, tended to attract attention to their cultivation and thus to lead others to appreciate their beauties.

Resolved, That these resolutions be entered upon the records, and a copy sent to the family of the deceased.

Adjourned to Saturday, May 2.

BUSINESS MEETING.

Saturday, May 2, 1874.

An adjourned meeting of the society was holden at 11 o'clock. Vice-President C. O. Whitmore in the chair.

Francis Parkman, Chairman of the Library Committee, read the following communication from William E. Endicott, which was referred to the Committees on the Library and on Publication :—

April 24th, 1874.

Mr. Parkman :

Dear Sir :—It seems to me that our library lacks one thing, which, if supplied, would very much increase its usefulness; namely, a complete index to the plates. At present we have only Pritzel's "Icones," which, although very much better than nothing, is far from being what we need. In the first place, we have a great number of works to which Pritzel gives no reference at all, and that number, of course, is rapidly increasing. I believe that I speak within bounds when I say that half our plates are unmentioned by him. He gives no space whatever to fruits and fungi (indeed he leaves out all cryptogamic plants except ferns), which is surely a grave omission. Moreover, he has indexed many works which we do not possess, a meritorious thing abstractly considered, but injurious in its application to our needs.

These faults are irremediable unless a remedy be found in some plan like that which I am about to suggest. My idea is that a catalogue on cards would afford a ready, permanent, and inexpensive remedy for the evils of which I have been speaking. As each card would contain the name of only one species or variety, the arrangement could be made strictly alphabetical, for any new plate could have its card slipped in wherever it might belong.

I have made no estimate of the cost of such an undertaking, but I do not see any reason for its being very great.

I am, sir, very respectfully,

W. E. Endicott.

Adjourned to the first Saturday in June.

BUSINESS MEETING.

Saturday, June 6, 1874.

An adjourned meeting of the society was holden at 11 o'clock, President Strong in the chair.

James Gray, of Wellesley,
Herbert Merriam, of Weston,
Chauncy Smith, of Cambridge,
L. P. Thatcher, of Middleboro',
Louis Prang, of Boston,
John W. Blanchard, Jr., of Boston,
J. E. Coburn, of Everett,

were elected to membership.

Meeting dissolved.

BUSINESS MEETING.

Saturday, July 10, 1874.

A quarterly meeting of the society was holden at 11 o'clock, President Strong in the chair.

The members of the Committee on Vegetables (with the exception of two who were competitors for prizes) being absent, the president appointed J. W. Manning and Robert Manning a committee *pro tem.*

T. C. White, of Charlestown,
Henry H. Hobart, of Grantville,
John R. Newman, of Winchester,
Otis A. Ruggles, of Reading,
Frederick R. Shattuck, of Boston,

were elected to membership.

Marshall P. Wilder announced to the society the decease of Joseph S. Cabot, ex-president of the society, and Mr. Wilder and Robert Manning were appointed a committee to prepare suitable resolutions.

Adjourned to the first Saturday in August.

BUSINESS MEETING.

SATURDAY, August 1, 1874.

An adjourned meeting of the society was holden at 11 o'clock, Vice-President CHARLES O. WHITMORE in the chair.

Marshall P. Wilder, from the committee, presented the following resolutions upon the decease of Joseph S. Cabot, which were unanimously adopted:

Resolved, That by the decease of Hon. Joseph S. Cabot, ex-president of this society, we have lost one of our oldest and most respected members, who for many years discharged the duties of various official positions, both in this society and in the community, with marked ability and unimpeached integrity of character.

Resolved, That as a testimonial of respect for our deceased friend and co-laborer, we desire to record our appreciation of his worth, that it may live in the future, when we also shall have ceased from our labors on earth.

Resolved, That a copy of these resolutions be forwarded to the family of the deceased as a token of our sympathy in their present bereavement.

Remarks were made by Robert Manning, Francis Parkman, and Marshall P. Wilder.

On motion of George W. Pratt, it was

Voted, That a committee of seven, of which the president of this meeting be chairman, be appointed to nominate a list of officers for the ensuing year.

The chair appointed Charles O. Whitmore, John C. Hovey, George W. Pratt, John G. Barker, Charles N. Brackett, Benjamin G. Smith, Hervey Davis.

Adjourned to the first Saturday in September.

BUSINESS MEETING.

Saturday, September 5, 1874.

An adjourned meeting of the society was holden at 11 o'clock, President Strong in the chair.

Charles O. Whitmore, chairman of the committee to nominate officers for the year 1875, presented the report of that committee, which was accepted and the committee discharged.

Marshall P. Wilder announced to the society the decease of Joseph H. Billings, of West Roxbury, and Francis Dana, of Roxbury, and, on motion, Marshall P. Wilder, Edward S. Rand, Jr., and Robert Manning, were appointed a committee to draft appropriate resolutions.

Rev. Alexander H. Vinton, D. D., of Boston,
E. S. Brownell, of Essex Junction, Vt.,
Edwin Fletcher, of Acton,
Ephraim W. Bull, of Concord,
James H. Morton, of Boston,
Michael H. Walsh, of Boston,

were elected to membership.

Meeting dissolved.

BUSINESS MEETING.

Saturday, October 3, 1874.

A stated meeting of the society was holden at 11 o'clock, President Strong in the chair.

Marshall P. Wilder, from the committee, reported the following resolutions, which were unanimously adopted:

Resolved, That in the decease of Joseph H. Billings, one of our earliest members, not only this society but the public at large have sustained a great loss.

Resolved, That we shall long miss the kindly words and cheerful presence of one who, by his genial nature endeared himself to all with whom he was associated, no less than he commanded respect by his stern integrity and noble traits of character, of which his portrait now adorning our Hall will ever keep us in remembrance.

Resolved, That the secretary be instructed to send a copy of these resolutions to the family of the deceased.

Further *Resolved*,

That we have heard with deep regret of the decease of Francis Dana, for many years an esteemed member of this society, whose labors in the production of seedling fruits, especially the Pear which bears his name, will long cause him to be remembered among horticulturists, no less than the memory of his quiet, modest, unassuming manner and upright character will ever remain with those whose privilege it was to associate with him.

Resolved, That a copy of these resolutions be sent to the family of the deceased.

Remarks were made by Mr. Wilder, Aaron D. Weld, Robert Manning, and Edward C. R. Walker.

This being the Annual Meeting for the choice of officers, E. W. Buswell, J. E. M. Gilley, and Robert Manning, were appointed a committee to receive, sort, and count votes.

John Falconer, of Rochester,
H. H. Hall, of Lawrence,
Charles P. Grammer, of Boston,

were elected to membership.

A communication from F. L. Capen, upon weather predictions, was read by the secretary. On motion it was laid upon the table.

The committee reported the whole number of votes to be 145, and the election of the ticket as reported by the committee on nominations.

Adjourned to Saturday, October 17.

BUSINESS MEETING.

SATURDAY, October 17, 1874.

An adjourned meeting of the society was holden at 11 o'clock, President STRONG in the chair.

The secretary read the following communication:

WELLESLEY, October 12, 1874.

E. S. RAND, JR., ESQ.,
Recording Secretary of the Massachusetts Horticultural Society.

Dear Sir:

I have received your communication under date of the 10th inst., informing me that I had been elected President of the Massachusetts Horticultural Society for the year 1875.

I take the earliest opportunity to express my sincere thanks to the society for the great honor they have conferred on me in electing me as their President, and while it would be most pleasant for me on many accounts to serve them as such, I regret it will be impossible for me to do so in a manner satisfactory to them or myself, with my numerous engagements, absorbing as they do all my time, and I must therefore respectfully decline their kind invitation.

I need not assure the society that I most fully appreciate the compliment that has been tendered me in so honorable an office, filled as it has been by gentlemen distinguished for their public spirit and zeal in horticultural pursuits, and that it has my best wishes for its continued prosperity and the increased support and patronage it so well merits from the community generally.

Very respectfully yours,

H. H. HUNNEWELL.

Voted, That a special election to fill the vacancy in the office of President be holden on Saturday, November 7, at 11 o'clock.

MRS. MARY HITTINGER, of Belmont,
was elected to membership.

Adjourned to Saturday, November 7.

MEETING FOR DISCUSSION.

The subject assigned for discussion was "Legislative enactments to prevent the multiplication of injurious insects in neglected orchards." It was commenced by E. S. Rand, Jr., who said that he investigated the subject several years ago when it was under discussion in the Dedham Fruit Growers' Protective Association. Mr. Rand said that all had experienced the ill results of the neglect of others, and mentioned an orchard in West Roxbury which he saw last spring as he was driving by. He had the curiosity to go into the orchard, which contained perhaps two hundred trees, and found that every leaf had been eaten by the tent caterpillars, and they had then begun on the young shoots. There were, on an average, ten or twelve nests on every tree, some of them as large as a peck measure. The neighbors had offered to destroy these caterpillars without cost to the owner, but he refused to permit them, alleging his right to raise as many caterpillars as he pleased, and consequently they were obliged, year after year, to fight the caterpillars propagated in this orchard. Mr. Rand thought that it was a proper time to take measures to urge the subject on the legislature. Six years ago a petition from the Dedham Association, for a law to meet such cases as had been described, with one from this society in aid, was presented by the legislature. A draft of a bill was also presented and referred to the Committee on Agriculture, of which George B. Loring was chairman on the part of the Senate, and Daniel Needham on the part of the House. Both these gentlemen expressed their approval of the measure, but the bill was never reported.

Mr. Rand said that legislation for the protection of the careful against the careless was not a new thing. In the Western States and Canada, land owners were required by law to exterminate noxious weeds not only from their grounds, but from the roadsides adjoining; and, if not done by the owners, it might be done, by officers appointed for the purpose, at the expense of the owners. This legislation was especially directed against the Canada thistle. Mr. Rand closed by reading the petition and bill, remarking, however, that the originators of the movement did not put them forth as the best that could be devised, but only as indicating their

views, and that they would be glad of any suggestions for their improvement. The petition and bill were as follows:

To the Honorable the Senate and the
House of Representatives, in General Court assembled:

Respectfully represents the Dedham Fruit Growers' Association:

That there is necessity for legislation to prevent the undue increase of insects injurious to vegetation, more especially those commonly known as tent caterpillars, canker worms and curculios.

That the fruit crop, more especially the apple crop, of Massachusetts, has greatly decreased of late years owing to the ravages of these insects, and that, in the absence of any efficient law for their destruction, there is danger that the planting of orchards will be discontinued in the future, owing to the uncertainty of prospective returns.

That the labors of the owners of orchards to destroy these insects are rendered, in a great measure, inoperative, owing to the number of wild cherry and plum trees and worthless apple trees which are allowed to grow along roadsides and in neglected fields, and which are of no value for fuel or otherwise, and only serve to breed noxious insects.

That also, owing to the neglect of many persons owning orchards to destroy these insects in the proper season, the matured insect infests and peoples the fields and orchards of those who are desirous of preserving their fruit and keeping their orchards and grounds in good condition.

That, especially in eastern Massachusetts, the canker worm is committing great devastation, and is yearly increasing in numbers and progressing westward.

That without concerted action, which it is impossible to procure without suitable legislation, there is no means of preventing the destruction of the fruit crops, and the immense injury annually done to ornamental trees.

The said society, therefore, by its officers duly authorized as by vote hereto annexed, would respectfully petition for the enactment of such laws to promote the destruction of noxious insects as aforesaid, as to your honorable body shall seem meet and expedient.

An Act for the Destruction of Insects Injurious to Vegetation.

I. The mayor and aldermen of any city, or the selectmen of any town, shall, on request of fifteen legal voters, on or before the first day of April, in each and every year, by writing under their hands, appoint one or more suitable persons, inhabitants of their respective cities and towns, to be Inspectors of Orchards and Trees.

II. The duties of such Inspectors shall be from time to time to notify, in writing, mailed to their address, owners of orchards, fields or pastures, in which trees infested with insects injurious to vegetation, especially tent caterpillars and canker worms, are growing, to remove said insects from said trees or to cut down said trees, so promoting the breeding of noxious insects.

III. In case the owners of said trees shall unreasonably refuse or neglect so to destroy said insects or to cut down said trees, for the space of ten days, the said Inspectors shall have right to enter upon the said premises, and, as in their judgment may seem best, to destroy said noxious insects, to protect said trees from their attacks, or cut down said trees, but always at the expense of the owners of said trees, to be recovered by a suit brought in the name of said Inspectors, before any Police Court or Justice of the Peace in said city or town.

IV. The said Inspectors shall also have full authority and it shall be their duty to destroy all trees, such as wild cherry, wild plum, wild or old apple trees growing by roadsides or in pastures, provided the owners thereof or of adjoining land shall fail, after notice as aforesaid, to destroy insects thereon or to cut down said trees, provided always that no tree, valuable for fruit or shade, shall be destroyed under this Act, unless the owner thereof refuses to protect the same from the ravages of insects; and the said Inspectors shall have power to protect the same if they shall deem it expedient, but always at the expense of the owner thereof, to be recovered as aforesaid.

V. The said Inspectors shall be allowed all reasonable expenses incurred by them in the prosecution of their duty, and also at the rate of three dollars per day for all time spent by them in the duties of their office, the same to be paid out of the treasury of said city or town under warrant from the mayor and aldermen or selectmen.

VI. The said Inspectors may at any time be removed by the mayor and aldermen or selectmen for neglect of the duties of their office, and upon such removal new Inspectors shall be appointed as aforesaid, to fill the vacancy or vacancies so occasioned.

VII. All suits brought under this Act by any Inspector, shall survive and may be prosecuted by his successor or successors in office.

VIII. This Act shall take effect from and after its passage.

Benjamin G. Smith thought that his crop of apples had been reduced at least one-half by the insects propagated on his neighbor's grounds.

President Strong said that our venerable ex-president, Joseph Breck, was much annoyed in his last days in the same way. The injury to the fruit crop, however, is not the only aspect of the case; the disfigurement to the landscape by the depredations of caterpillars and canker worms, is deserving of consideration.

Rev. A. B. Muzzey said that he had no personal interest in the subject, but was in favor of the proposed measure. He referred to the principle of common law, that every man should so use his own property as not to injure that of his neighbor, and thought this a case under that law. While the law is very jealous of injury to property in minor matters,—trespass for example, not permitting a man to enter his neighbor's ground and take even a single apple without permission—here is a much stronger case, for which the law makes no provision. Throughout the commonwealth there are hundreds and thousands of people suffering from the neglect of their neighbors. He thought the question should be put on the broadest ground, and believed there were men in the society who could make an impression on the legislature and the public that would be felt. The question of the protection, not only of fruit, but of forest trees, is destined to be of great importance throughout the country, both from a sanitary and meteorological point of view.

D. B. Flint said that he came from a district in Belmont and Watertown which was badly infested with canker worms. When he bought his place the trees had been so much injured by canker worms that they produced no apples, but he began protecting his trees with printers' ink, and after using it three years he had some apples. He had found a substance made by J. B. Alley, of Salem,

for the purpose, better than the ink. His neighbors, generally, had protected their trees in various ways, but one who has an unprotected orchard adjoining his grounds, has great trouble. Many orchards that would bear hundreds or thousands of bushels are now unproductive by reason of these canker worms, and many trees in Arlington have had their foliage entirely destroyed by caterpillars. Mr. Flint thought there would be no objection to requiring by law that owners of trees should destroy the insects infesting them, for the cost would be small and the returns large.

John B. Moore, being called on by the president as a member of the legislature and a man of practical experience in orchard culture, said that he heartily agreed with all that had been said in favor of destroying noxious insects, but doubted the power of the legislature to pass such a law as was proposed, and did not believe it would be effectual if passed. He did not think it would be practicable to require surveyors of highways to destroy noxious weeds at the expense of the owners of adjoining lands. Mr. Moore wished it understood that he mows all his roadsides, but did not believe in compelling people to do it. The town of Concord, where he lives, is perhaps half covered with wood, all through which are thousands of wild cherry trees, large and small, which in spring are covered with caterpillars, but it would be impossible to compel owners, especially non-residents, to destroy them. He agreed with previous speakers with regard to the necessity of destroying them, but it must be done through farmers' clubs and horticultural societies, educating the people to do it.

Mr. Rand agreed with Mr. Moore that it would be difficult to get such a law through the legislature, but thought the experiment worth trying.

President Strong remarked that other towns might be differently situated in this respect from Concord, and that the proposed law would be in force only in such towns as adopted it.

Mr. Moore said he did not believe in "local option" either for liquor or insect laws; he thought the laws should be the same in Concord, as in Newton or Brighton.

Mr. Rand said that he did believe in "local option."

D. W. Lothrop quoted the remark of Mr. Emerson, in the "Trees and Shrubs of Massachusetts," that the wild cherry being, more than almost any other fruit tree, subject to the ravages of caterpillars, might be a protection to cultivated trees by inviting

the butterfly from them to itself. Mr. Lothrop did not agree with this view, but thought it the duty of all to cut down the wild cherry trees. The work is so hemmed in with difficulties that all the legislatures and congresses in the country could not accomplish it. If a law were enacted, such as is proposed, it would be difficult to enforce it. The means of destroying the canker worm are imperfect, and though agriculturists have long had a spite against them their ravages continue. Mr. Lothrop inquired why caterpillars had been so much more numerous this year than usual, and said there was probably some unknown law governing their appearance and disappearance. His experience also had been that though the nests might be destroyed at night they would be rebuilt in the morning. Birds will not eat them, though heavy rains and late frosts might have the effect to diminish their numbers. He thought we should urge people to destroy caterpillars in their trees—if we undertook to compel them, the result would be that they would cut down their apple trees.

Mr. Flint thought it had been demonstrated that the canker worm can be destroyed. Caterpillars should be killed while young. His observation was that they were found in their nests regularly three times a day, at morning, noon and night, and these are the times to attack them. After they get so large as to travel over the fences it is too late to destroy them.

Mr. Rand said that, if no one had any further remarks to make on the subject assigned for discussion, he would call attention to six orchids on exhibition, all natives of the western hemisphere. Four of these were from Messrs. Hovey & Co.; two, *Maxillaria picta*, which is easily grown in any greenhouse. Another was the *Cattleya Loddigesii*, a beautiful species, also easily grown in the greenhouse. The fourth, *Epidendrum cochleatum*, Mr. Rand thought hardly worth growing. The other two were exhibited by Mr. Rand, viz., *Oncidium altissimum*, remarkable for its abundant floriferous properties, this plant having been exhibited in flower at the Rose Show in June, since which time the flowers have died away, and where each flower was in June, there is now a flowering branch with numerous flowers. The stalk shot up to the height of six feet, much branched and filled with bright yellow flowers; a rough count gave six hundred and thirty-two. The other, *Lælia Perrinii*, is a very beautiful species, with petals of a delicate rose

color, the extremity of the lip being bordered with rich purple, and blooms at a season when we have very few *Cattleyas* or *Lælias* in flower. The plant exhibited had been in bloom in Mr. Rand's parlor for three weeks, and would probably continue until Thanksgiving.

President Strong said, in regard to the subject previously under discussion, that he believed some remedy for the trouble complained of is practicable, and he hoped that the subject would come up again. He suggested for discussion at the next meeting, the subject of the high colors of the foliage of trees and shrubs in autumn, and the question whether the difference in their colors as seen, for instance, in woodbines, oaks and maples, some of which are much more brilliant than others, indicated different varieties or was produced by some other cause.

BUSINESS MEETING.

Saturday, November 7, 1874.

An adjourned meeting of the society was holden at 11 o'clock, President Strong in the chair.

E. W. Buswell, Robert Manning and John G. Barker, were appointed a committee to receive, sort and count votes, for president, at the special election ordered for to-day.

William G. Fuller, of Stoneham,
George W. Dike, of Stoneham,
Rev. William Wilberforce Newton, of Brookline,
were elected to membership.

The committee reported the whole number of votes,	239
Francis Parkman, had	238

and was declared elected president for the year 1875.

Adjourned to Saturday, November 14.

BUSINESS MEETING.

SATURDAY, November 14, 1874.

An adjourned meeting of the society was holden at 11 o'clock, President STRONG in the chair.

The secretary announced an existing vacancy in the list of vice-presidents, caused by the election of Francis Parkman to the presidency.

Voted, That the secretary be ordered to give notice, according to the by-laws, of a special election to fill the vacancy, to be holden on Saturday, December 5, 1874.

Voted, That a committee of five be appointed by the chair to consider the expediency of petitioning the legislature for the enactment of a statute for the protection of orchards against the ravages of insects.

The chair appointed Robert Manning, Edward S. Rand, Jr., Benjamin G. Smith, John B. Moore and William H. Spooner as that committee.

LEWIS HILL, of Cambridge,
F. W. MASTERS, of Watertown,
were elected to membership.

Adjourned to Saturday, December 5.

BUSINESS MEETING.

SATURDAY, December 5, 1874.

An adjourned meeting was holden at 11 o'clock, President STRONG in the chair.

The special election ordered for to-day, to fill the vacancy on the board of vice-presidents, resulted in the choice of Charles O. Whitmore.

The president, in behalf of the Executive Committee, reported the Schedule of Prizes for the year 1875. Accepted.

The report of the Committee on Fruits for 1874 was read by Benjamin G. Smith.

The report of the Library Committee was read by Francis Parkman, chairman.

The report of the Flower Committee for 1874 was read by John G. Barker, chairman.

These reports were severally accepted and referred to the Committee on Publication.

Voted, That the Committee of Arrangements have full power to engage the Music Hall for the annual exhibition of 1875, if deemed expedient.

The report of the Vegetable Committee was presented by Charles N. Brackett, chairman.

Adjourned to Saturday, December 19.

BUSINESS MEETING.

SATURDAY, December 19, 1874.

An adjourned meeting of the society was holden at 11 o'clock, President STRONG in the chair.

The report of the Vegetable Committee was read by Charles N. Brackett, chairman. Accepted and referred to the Committee on Publication.

The report of the Committee on Publication and Discussion was read by Edward S. Rand, Jr. Accepted.

The report of the Editor was read by Robert Manning. Accepted.

The report of the Committee on Ornamental Gardening was read by H. Weld Fuller, chairman. Accepted and referred to the Committee on Publication.

The report of the committee appointed to consider the expediency of petitioning the legislature for the enactment of a statute

for the protection of orchards against the ravages of noxious insects was read by Robert Manning, chairman. Accepted and referred to the Committee on Publication.

Voted, That a committee of three be appointed by the chair to procure a portrait of the president elect, Francis Parkman. The chair appointed Charles O. Whitmore, William Gray, Jr., and Edwin W. Buswell as that committee.

The president read a communication from H. Weld Fuller, resigning the chairmanship of the Committee on Ornamental Gardening. Laid upon the table, and a committee, consisting of Marshall P. Wilder, John G. Barker and Benjamin G. Smith, appointed to confer with Mr. Fuller.

The following persons were elected to membership:

James F. Cox, of Abington,
Moses Darling, Jr., of Boston,
Dr. E. P. Colby, of Wakefield,
J. R. Kendall, of Woburn.

Meeting dissolved.

N. B. The Committee on Publication and Discussion wish it distinctly understood, that the society is not responsible for the views expressed by the different speakers in the foregoing discussions, undertaking only to present the substance of their remarks correctly. They would also expressly disclaim any responsibility on the part of the society for descriptions quoted in the Reports of Committees, or for any other statements than those derived from actual observation of the Committees.

REPORTS.

REPORT OF COMMITTEE ON PLANTS AND FLOWERS,

FOR THE YEAR 1874,

By JOHN G. BARKER, Chairman.

The exhibitions of the past year may be safely said to have been among the most successful ever held by the society. Particularly is this true of those held during the early months of the year, which is undoubtedly owing, in a large degree, to the discussions held at the same times. At each of these exhibitions rare and fine specimens of Flora's choicest productions were presented, and a growing interest has been continually manifested in this department of the society's work. The number of exhibitors has been about the same as last year; those whom we have been accustomed to look upon as regular contributors having been constant in their attendance, and performing their part well, and the changes being less than usual. The valuable contributions from Louis Guerineau of the Cambridge Botanic Garden, which always added very much to the interest of the exhibitions in the way of new and rare plants, have been missed during the past year; and it is with regret that we hear that Mr. Guerineau has left the country; but the many others whose names are familiar to all, have always brought in their best productions. The new and rare plants of James Comley, the splendid orchids of E. S. Rand, Jr., the handsome geraniums of Wm. Gray, Jr., the superb flowers from Joseph Clark, the well arranged cut flowers from James O'Brien and others, the neat and handsomely arranged baskets by the ladies,

and the valuable contributions by the many other exhibitors, all speak of their love and interest in the society.

The exhibitions have been held during the year as follows: The first on

January 3.

When E. S. Rand, Jr., exhibited a splendid plant of *Phalœnopsis amabilis*, a native of Manilla. This is the first time that this plant has been exhibited, and although the specimen was comparatively small it was obtained at great price. It is appropriately called the "Queen of Orchids"; the flowers are arranged in two rows down the spike, the sepals and petals are pure white, the lip of the same color, the inside being delicately marked with a rosy pink. If kept free of moisture, the flowers will remain in perfection a long time.

From W. C. Strong we had a splendid specimen of *Adiantum Farleyense;* this beautiful plant was in the very best condition, and when such a beautiful specimen is seen, there is no wonder that it should be pronounced the best of all the Adiantums. Choice cut flowers and a small plant of Rhododendron Princess Alexandra, a new greenhouse variety, were shown by James Comley.

January 10.

We were favored with another of Mr. Rand's splendid orchids, *Calanthe Veitchii*, a hybrid between *Calanthe vestita* and *Limatodes rosea*. This is said to be one of the best and most useful orchids for winter blooming. The flowers are striking and attractive, the spikes being from twelve to eighteen inches long, and the blossoms of a rich rose color.

Three very handsome cyclamens were shown by James O'Brien, one of which was particularly noticeable, the foliage being very finely marbled, with an abundance of flowers well above the foliage.

From Hovey & Co. came a small plant of the beautiful *Cattleya Trianæ.*

January 17.

Joseph Tailby exhibited the following varieties of Primulas, which were in small pots, and from appearances were a decided improvement in this useful class of plants, viz., *P. filicifolia grandi-*

flora rosea, *P. filicifolia alba*, *P. sinensis fimbriata kermesina splendens*, *P. sinensis fimbriata* carnation striped.

James Comley showed very fine spikes of flowers of *Bouvardia Vreelandii*, and fine buds of the beautiful Tea rose, *Alba rosea;* white, centre rose, large, full, and very sweet; and Marie Accary (Noisette), flowers white, slightly tinted with rose and yellow; of medium size, very full, well formed; growth very vigorous and climbing; a pretty variety (Paul).

Baskets of flowers were placed on the tables by Mrs. A. D. Wood and Mrs. S. Joyce, arranged with choice flowers in their usual excellent style.

January 24.

The feature of the exhibition to-day was the magnificent cyclamens from James O'Brien and C. B. Gardiner. These were undoubtedly the finest plants that have ever been exhibited; those from Mr. O'Brien were the admiration of all. The elegant form and varied colors and markings of the cyclamen, and the freedom with which the flowers are produced, with the length of time which they continue in great beauty and freshness, are all valuable qualities. The foliage, too, is very ornamental; especially so were some of these plants, the centre of the leaves being beautifully marbled, with the edges green, the marking being very uniform. The flower spikes with their pretty pink flowers raised well above the foliage, and the abundant bloom, some of the plants having each at least one hundred and fifty buds and blossoms, made them objects of great beauty. C. B. Gardiner showed four plants grown in small pots, and, in proportion to their size, equally as good as the first mentioned. Great credit is due to these gentlemen for bringing this useful plant to so high a degree of perfection, and there is no doubt that the fine plants shown to-day will inspire a new interest in its cultivation, so that, instead of seeing, as we do now, only a few in our greenhouses, it will be a general favorite with all, it being equally well adapted for window gardening or greenhouse culture.

Two well grown pots of that useful ornamental greenhouse plant, *Lachenalia pendula*, were shown by James Comley, and two very fine plants of Primula semi-double by J. B. Moore.

E. S. Rand, Jr., exhibited *Gesnera bulbosa*, one of the oldest

and best of the genus; also *Saccolabium violaceum*, a superb orchid from Manilla, where it attains the greatest perfection on the stems and branches of trees; the leaves are about a foot long and two inches broad; the racemes are a little longer than the leaves and are densely clothed with bloom; the sepals and petals are white, irregularly dotted with mauve and lilac, the lip violet in the centre with mauve at the sides. This plant bore four beautiful spikes of bloom, and although the species is said to be somewhat difficult to manage, it will well repay all extra care bestowed upon it, as it produces its beautiful flowers during the dullest part of the year.

January 31.

Cut flowers, a choice collection of named varieties, were shown by James Comley, among which were two bunches of the new violet, Marie Louise; the flowers were large and very double, purple with white centre, and said to force well. From Hovey & Co. came a small plant of *Phaius maculatus*, with a single spike of flower; and from James O'Brien, a very fine specimen cyclamen, the best single plant shown this season.

February 7.

Small plants of azaleas and a single bud of a new rose marked Jonquil, were shown by James Comley. By J. B. Moore, Azalea Bijou de Ledeberg, a small well-grown plant with variegated foliage; and a fine spike of *Amaryllis Cleopatra*. From C. M. Atkinson, a very fine well-grown plant of *Imatophyllum miniatum;* this was a splendid specimen, with ten spikes of flowers, and in excellent order. Choice baskets of flowers were contributed by Mrs. Joyce, Mrs. Wood, and Mrs Gill.

February 14.

E. S. Rand, Jr., exhibited two very fine Orchids, *Angræcum sesquipedale* and *Lælia peduncularis*, the first time these rare plants have been shown. They can be found fully described on pages 26 and 27, Part I, of the Transactions for 1874.

Azaleas in pots were shown by James Comley, — Favorite, Coquette de Gand, *Semi-duplex maculata*, Baron Ed. Osy, Louise

Marie, Grand Duchesse de Bade, and a fine Tea rose in a pot, Mad. Bravy, creamy white, large and full. George E. Davenport brought a small but pretty specimen of *Camptosorus rhizophyllus* (Walking Fern).

February 21.

Mrs. S. Joyce contributed a well-grown plant of *Amaryllis fulgida*, in a seven inch pot, with six fine spikes of flowers. The two Orchids exhibited by E. S. Rand, Jr., *Dendrochilum glumaceum* and *Lycaste Skinneri* are reported on page 34, Part I, of the Transactions for 1874. Cyclamens again formed an interesting part of the exhibition, C. B. Gardiner and James O'Brien each showing very fine plants; a pink flowered one from Mr. O'Brien, was especially noticeable, it being of a dwarfer habit than they usually are, of a very symmetrical growth and handsomely flowered. Hovey & Co. exhibited Azaleas in pots, of the following varieties: *Punctata*, *Fimbriata alba*, Princess Alexandra, and Mad. Vandercruyssen; also *Ixora coccinea*, and choice cut flowers of camellias. A fine vase of *Bouvardia Vreelandii* was shown by James Comley, and a very tastily arranged basket of flowers by Mrs. Wood.

February 28.

Joseph Tailby exhibited a new Tea rose, a sport of Isabella Sprunt, and named Eliza Tailby, which is fully reported on page 40, Part I, of the Transactions for 1874. *Tacsonia Van Volxemi* from E. S. Rand, Jr., *Bougainvillea spectabilis* and *glabra*, and *Magnolia Lenne* shown by Marshall P. Wilder, are also fully reported on page 44, of Part I. That splendid Orchid, *Saccolabium giganteum*, was exhibited by E. S. Rand, Jr. It is a native of Burmah, and was first brought to the notice of the public by the Messrs. Veitch, in the autumn of 1866. It is very much like *S. violacea*, continues a long time in bloom, and is deliciously sweet. Mr. Rand also showed *Cattleya Trianæ;* there are a number of varieties of this superb, winter blooming *Cattleya*, that shown being one of the best. James Comley again exhibited seven varieties of Azaleas, small plants of good varieties, many of them new and promising well; also a semi-double Primula, Lilac Queen, and a very fine display of *Bouvardia Vreelandii*.

March 7.

This being premium day for Greenhouse Plants, a collection was exhibited by Hovey & Co. The most noticeable plants were *Bletia Tankervilleæ*, *Euphorbia jacquiniflora*, *Rhyncospermum jasminioides* and *Anthurium Scherzerianum*. The only competitor for the Cyclamen prize was James O'Brien, and the plants exhibited fully sustained his well earned reputation as a grower of this beautiful flower. The Camellias from Hovey & Co., were indeed splendid; the note of this display, on the book of the Chairman of the Committee, is that no better exhibition was ever made here of this deservedly popular flower. James Comley exhibited a very beautiful lot of cut flowers, also *Aralia Veitchii*, fully described in Part I, page 45, of our Transactions for 1874. The superb Orchids shown by E. S. Rand, Jr., are also described on page 46, and the fine plant of *Dendrobium nobile*, exhibited by James Cartwright, on page 49. Fine plants of Cinerarias, well-grown and in healthy condition, were shown by James Grey; these were very attractive, there being a pleasing variety in the color of the flowers, and the plants themselves being large and very showy. Mrs. A. D. Wood exhibited a collection of pot plants of choice varieties of Cinerarias and Primulas. From Marshall P. Wilder came the following fine Azaleas: Mad. Camille Van Langenhove, snow white, some of the flowers barred with salmon, others striped with light rose and carmine, a very beautiful and effective variety; Cinti Striatella, a fine free flowering kind; and Nonpareil, white, ribboned with rose, and a splendid variety. From W. C. Strong, there was a fine standard Hybrid Perpetual Rose, Carl Cœrs. From George E. Davenport *Cypripedium acaule*, grown in a pot in the sitting room window; and from John Robinson, *Trillium grandiflorum*, with five flowers, treated the same as hyacinths.

March 14.

E. S. Rand, Jr., exhibited *Cypripedium Harrisianum*, a hybrid between *C. barbatum* and *C. villosum*. The plant was imported in July, 1873, and at the time of exhibition there were two flowers on it; when well established it will undoubtedly be a fine object. A handsomely trained plant of *Kennedya Comptoniana*, one of the most beautiful evergreen climbers for the greenhouse, with purple

flowers, was shown by C. M. Atkinson; and six fine varieties of Azaleas, and a well-grown plant, in fine flower, of *Cypripedium barbatum* by James Comley.

March 21.

A display of plants and flowers of more than ordinary merit was on exhibition to-day. The handsomely trained standard Azalea from J. B. Moore, named *Decora*, very deservedly received the highest praise of all. The luxuriant foliage formed a fine relief to the large number of flowers and made it an object of more than usual attraction. Particularly noticeable, also, was a small plant of Azalea Francois de Taye, which Van Houtte says is one of the finest in cultivation. From James Comley we had a magnificent display of cut flowers, consisting principally of some of the choicest roses ever shown; also a fine plant of *Rhododendron Veitchianum lævigatum*, which will grow freely in a warm greenhouse, and bloom for a long time; the flowers are clear waxy, and valuable for all kinds of floral decorations. This very fine variety was shown for the first time. Three fine varieties of Azaleas were shown by Marshall P. Wilder—Roi Leopold, orange color, spotted with amaranth, the flowers being of fine form; Hermann Seidel, with double flowers, of a bright rose color, and Jean Van Geert, of bright, glossy rose color; also, *Azalea mollis* one of a new, hardy species from Japan, of which Van Houtte says: "It is quite a novel tribe, beautiful habit, large foliage, first rate large flowers, of all hues, in red, white, yellow, primrose and flesh colored tints. These flowers, of perfect form and as large as those of hardy rhododendrons are most brilliant." The variety shown was Isabelle Van Houtte, flowers very large, beautiful dark nankeen spotted with orange. Magnificent orchids were again exhibited by E. S. Rand, Jr., viz.: *Vanda cœrulescens*, probably the only plant in the country; *Epidendrum macrochilum roseum*, *Vanda tricolor* and *Dendrobium Japonicum*, which are described in Part I of the Transactions for 1874, page 55. A superb vase of cut flowers, and vases of verbenas were shown by Mrs. A. D. Wood; native flowers by George E. Davenport; and azaleas and camellias by Hovey & Co.

March 28.

From W. C. Strong were the following tricolor geraniums; the colors were very brilliant, and the marking so beautiful that they were objects of special attraction, viz., Radiancy, Peter Grieve, Sir R. Napier, Dreamland, Guardsman, Rosalind, Lass o'Gowrie, Queen of Hearts, Earl Roslyn, St. John's Wood, Emperor of Brazil and Prima Donna. From William Gray, Jr., *Azalea illustris alba*, a handsome specimen plant, standard, grown without the use of strings to tie it to the required shape, as Mr. Gray does not believe in that way of training. It was a good exhibition of his skill in carrying out the correct idea of training specimens, by pinching, and not tying down. Also, Azalea Souvenir de Prince Albert; large, double flowers, with broad lobes of white and rose, edges pure white; and twelve superb trusses of geraniums, which were very large and fine, and of several shades of color. The splendid plant of *Dendrobium macrophyllum giganteum* (*superbum*), from E. S. Rand, Jr., is reported on page 58, Part I, of our Transactions for 1874. From James Comley, a very fine display of roses, amaryllis, etc., in pots, and a fine collection of cut flowers in vases very tastefully arranged. Francis Putnam exhibited a nice collection of seedling amaryllis, mostly from *A. vittata* and its varieties. George E. Davenport showed *Aplectrum hyemale* (Putty Root, or Adam and Eve), the first one that has been exhibited.

April 4.

Dendrobium albo sanguineum, a splendid orchid from India, was shown by E. S. Rand, Jr.; the flowers are very large, produced from near the top of the pseudobulb, and are of a creamy white, with a crimson blotch in the centre of the lip. It lasts a long time in perfection, is very distinct, and a fine showy plant. A fine lot of cut flowers of roses came from James Comley, and baskets of flowers from Mrs. Wood and Mrs. Joyce.

April 11.

The beautiful tricolor geraniums from William Gray, Jr., were the attraction of the day, and were without doubt the best ever exhibited. The following varieties Mr. Gray considers among

the best silver tricolors,—Eva Fish, Excellent and Mrs. Clutton; and of golden, Achievement, Peter Grieve and Miss Goring. Mr. Gray also showed the Emperor of Brazil, a fine bronze variety, of a beautiful compact growth and excellent habit, with a deep handsome zone; and a magnificent zonale geranium, Lady C. Kennedy,—one of the best specimen plants ever shown. The flowers are of an intense bright scarlet, in the way of Jean Sisley, but very much better; it is one of the best scarlet geraniums ever sent out.

E. S. Rand, Jr., showed *Vanda tricolor*, with three spikes of flowers, which are of a pale yellow, spotted with crimson, lip purple, striped with white, and lasting a long time in perfection. It was a magnificent plant, and undoubtedly the best single specimen orchid ever exhibited. C. M. Atkinson exhibited a very handsomely trained plant of *Chorozema Lawrenciana*, a native of new Holland, and one of the most beautiful greenhouse plants. James Comley showed a fine collection of tricolor geraniums of silver and bronze varieties, and two pots of *Silene pendula compacta*. There were also bouquets and baskets of flowers from James McTear, Mrs. Wood, Mrs. Joyce and Mrs. Gill.

April 18.

Jackson Dawson exhibited a plant of *Lilium auratum* with a spike of eighteen flowers from one bulb. E. S. Rand, Jr., exhibited *Dendrobium Cambridgeanum*, a native of India; the plant shown is the first one in this country. This species was obtained by Mr. Such, of South Amboy, N. J., at a cost of sixty guineas; this plant is an offset from Mr. Such's. The habit is drooping and the flowers are produced on the young growth; the sepals and petals are of a bright orange; the lip has a crimson blotch in the centre. Also from Mr. Rand, *Dendrobium infundibulum moulmeinense*, a species of great beauty, resembling *D. formosum* in habit and growth of flower, but far surpassing it in size and profusion of bloom. From William Gray, Jr., *Retinispora filiforme pendula fol. var.*, a rare evergreen from Japan; this is the first plant that has been exhibited, and no other plant is known in the country. There was also a good display of bouquets, baskets of flowers and cut flowers by various contributors.

AZALEA EXHIBITION.

April 25.

This exhibition was hardly up to the usual standard, probably owing to the absence of those who have been looked upon as regular contributors; there were, however, some fine large plants exhibited by Marshall P. Wilder, probably as large as any ever exhibited. These plants were well trained, not by tying, but by being kept pruned and pinched in shape, and afforded full proof of the skill and good taste of the exhibitor, and though old varieties were not equalled by many of the new ones. There was also a collection of six varieties from Hovey & Co.

For the first time in a number of years, the premium for Polyanthus drew out an exhibitor, C. M. Atkinson, who showed twelve very fine distinct varieties. E. S. Rand, Jr., exhibited a small plant of *Cattleya Skinneri.* William Gray, Jr., sent two handsome Zonale Geraniums, which were well grown, short jointed, with unusually fine foliage, extending to the rim of the pot, no part of the stems being naked. These were fine healthy specimens, and showed that more than ordinary care had been bestowed upon them to bring them to so high a state of perfection. They were grown in twelve inch pots and were some three feet high and as much through, with trusses of bloom truly enormous. Mr. Gray also exhibited twelve very large and fine heads of bloom of as many varieties. James Comley showed a choice collection of cut flowers; James McTear, bouquets and *Amaryllis regina;* C. M. Atkinson, six Pansies in pots, of a handsome dark variety, well grown and flowered; Hovey & Co., Tree Pæony Gloria Belgarum and cut flowers of that beautiful Camellia, Mrs. Anna Maria Hovey; Robert Manning, *Cornus mascula;* Mrs. C. W. Jaquitte, Pelargonium Mad. Von de Were, a very pretty little plant grown in a window; Mrs. C. N. S. Horner, native flowers and ferns; and several other contributors, baskets, bouquets and cut flowers.

May 2.

There was but little to-day to make a special note of. Miss Saunders showed *Draba Caroliniana;* James McTear, a pretty Clematis from North Carolina, and *Primula cortusoides;* J. H.

Woodford, *Tropæolum Jarratii*, which was very pretty; and there was a good display of baskets of flowers and cut flowers by the usual contributors.

May 9.

One of the most beautiful displays of Orchids was made by E. S. Rand, Jr., who exhibited four fine varieties of *Cattleya Mossiæ*, which added very much to the interest of the exhibition. The "Gardener's Chronicle," for 1864, p. 553, thus speaks of this species: "Four hundred blossoms of *Cattleya Mossiæ* at one view! This is a sight truly worth a journey to the Land's End to witness, and it is a sight that might have been witnessed a few days since, if it may not even now, in Mr. Warner's orchid house at Broomfield, near Chelmsford. And such blossoms too! Not puny things, with washed out colors, or pallid from sweltering in excessive heat, but located in a ventilated house quite enjoyable, and presenting richly marked colors in marvellous variety, and in all the vigor of robust health; the individual flowers measuring some seven or eight inches across, and the petals, in some cases, being as much as three inches in breadth. Mr. Warner has certainly learnt the secret of growing *Cattleya Mossiæ* to perfection, and consequently, such a picture as his show house presented at the time of our visit is not, we venture to say, to be paralleled in England, or Europe, or the world." May Mr. Rand's even excel this! Besides the *Cattleyas*, Mr. Rand also sent a plant of *Stanhopea eburnea spectabilis*, a very showy variety. From James Comley came three very beautiful Gloxinias—Elvierie, Fitz Gibherd, and Marchioness of Bute; also *Franciscea calycina major;* Hybrid Perpetual Rose, Countess of Oxford, bright carmine, red shaded, very large, full, and of fine form; *Clematis mutabilis grandiflora*, a very large and handsome flower, one of the finest ever shown, and one of the newest; and a magnificent show of buds of La France rose, which were delightfully fragrant. From James O'Brien we had nine named varieties of Azaleas in small pots; and from E. H. Hitchings native flowers, viz., *Cercis canadensis*, *Viola pedata* var. *bicolor*, *Phlox* sp., and *Houstonia cœrulea; Obolaria Virginica* from Washington; and *Cypripedium arietinum* from Vermont.

May 16.

Orchids again formed an interesting feature of the exhibition. E. S. Rand, Jr., showed splendid plants of *Aerides Fieldingii*, a fine free flowering species from India, the spikes long and branched, the flowers white and rose color, the leaves broad and from six to eight inches long, and altogether a fine exhibition plant; *Dendrobium transparens*, a rare plant, and the first ever exhibited, blooming in the same way as *Dendrobium nobile*, the flowers of a transparent pinkish lilac, stained in the middle of the lip with a blotch of deep crimson; *Oncidium cornigerum*, a very graceful and ornamental species, and quite distinct in habit; the spikes of flowers yellow spotted with deep red, and very beautiful; and *Oncidium sphacelatum majus*. From James Comley we had a beautiful collection of shrubby calceolarias in a fine variety of colors; from Miss Anna C. Kenrick, *Magnolia Soulangiana*, *M. Lenne* and *M. conspicua;* from Jackson Dawson, *Clianthus puniceus*, and *Viscaria cœli rosa;* from Mrs. C. N. S. Horner forty-two varieties of native flowers, and seven varieties from W. E. Davenport; hyacinths and tulips from C. M. Atkinson and George N. Noyes; and bouquets, cut flowers and baskets of flowers from J. McTear, Mrs. Wood, Mrs. Joyce and Mrs. Gill.

OPENING EXHIBITION.

June 6.

Calceolarias were shown in splendid style by Joseph Clark, whose plants were very fine and of an extra good strain; and Tree Pæonies, by Marshall P. Wilder, who exhibited splendid flowers of Osiris, Le Soliel, Nick Dillon, Lactea, Elizabeth, and Leopold. Of native flowers, a very nice collection, neatly arranged and properly named, was exhibited by Mrs. C. N. S. Horner. Cut flowers of the following rare shrubs were shown by E. S. Rand, Jr., *Rhodotypus kerrioides* and *Exochorda grandiflora*, mentioned in our report for 1873; also, Lilac Dr. Lindley, the spikes of flowers very large, of a beautiful lavender color, and delightfully fragrant; and Paul's new Scarlet Thorn. The Gardener's Chronicle says of the last that it is "much superior to any which had previously come under our notice, in the combined characters of depth of color and

doubleness. The blossoms were fully double, and the color a bright carmine red." James Comley exhibited seven new varieties of Gloxinias, which were very distinct and fine; most noticeable was one named Lady Cremorne; the flowers were semi-double, with a dark purple throat; the edge of the flower is white. Mr. Comley also brought *Hydrangea Otaksa*, a fine variety from Japan, with large clusters of bluish pink flowers; and *Bougainvillea glabra*, said to be the freest grower and bloomer of the genus, color a rosy pink. From George E. Davenport came choice varieties of native flowers and ferns, viz.: *Cypripedium arietinum*, *Tiarella cordifolia*, *Viola canadensis*, *V. rostrata; Trichomanes Petersii*, *T. radicans* and *Asplenium pinnatifidum*, from Alabama; *Camptosorus rhizophyllus* and *Asplenium ruta-muraria* from Vermont. From James McTear, *Silene exscapi* (new), *Agopodium podigraria variegata*, *Sedum arodium variegatum* and *Sempervivum arboreum variegatum*. From C. M. Atkinson, Rhododendron Iago, in a pot. From Francis Parkman a choice collection of herbaceous plants; from J. B. Moore three very handsomely grown gloxinias (these were extra fine); and cut flowers, and baskets of flowers by several contributors.

June 13.

The show of Rhododendrons, on account of the lateness of the season, was postponed from last week to this. H. H. Hunnewell, E. S. Rand, Jr., and Joseph Clark, each exhibited very fine collections, arranged in vases, and in boxes on a carpet of moss. Hardy Azaleas were shown by E. S. Rand, Jr., and Joseph Clark. These collections comprised many choice and fine varieties, and were much admired by a large number of visitors. From Francis Parkman we had the following fine varieties of Clematis, *Baumanii Standishii*, *cœrulea*, J. Gould Veitch, and *Fortunei;* also fine flowers of *Viburnum plicatum* and *Thalictrum aquilegifolium*.

From J. Warren Merrill, six English varieties or sports of *Athyrium Filix-fœmina*, viz.: *Gaudis*, *Fieldi*, *collina*, *Frizelliæ*, *heterophylla*, and *Thyssanotum;* also, *Athyrium Goringianum pictum*, a new fern from Japan. From George Everett, *Iris Susiana*, Clematis Albert Victor and *Standishii*. From W. C. Strong, flowers of the following beautiful shrubs: *Spiræa Reevesiana grandiflora*, a fine acquisition to this useful class of shrubs; *Weigelia Isolinæ*,

flowers clear white when first open, changing to blush; *W. nana variegata*, *W. arborea grandiflora*, *W. amabilis*, *W. rosea*, and *W. hortensis nivea*.

June 20.

W. C. Strong exhibited four varieties of Pyrethrum, and C. H. Lunt, *Lilium Chalcedonicum*, and Martagon Yellow.

ROSE EXHIBITION.

June 24 and 25.

On account of the backwardness of the season this exhibition took place one week later than announced in the schedule, and, notwithstanding everything seemed to work against a successful show, it was in every way worthy of the "Queen of Flowers;" the collections were unusually good, and the competition was more spirited than usual. For the benefit of those wishing to make collections of roses, some of the lists are appended. The twenty-four named varieties exhibited by William Gray, Jr., were:

Alfred Colomb. Bright fiery red; large and full; one of the best.

Baronne Prevost. Pale rose; superb.

Caroline de Sansal. Clear flesh color, edges blush; large and full.

Centifolia Rosea. Bright pink; large, of beautiful cupped form.

Comte de Paris.

Comtesse de Chabrillant. Pink; beautifully cupped, large and full; very sweet and good.

Edouard Morren. In the way of Jules Margottin, but of a lighter color; larger and more double.

Felix Genero. Beautiful violet rose; large, full, and of perfect globular form.

Fisher Holmes. Magnificent reddish scarlet, shaded with deep velvety crimson, very brilliant; large, full, and good form, one of the best.

General Barral.

John Hopper. Rose, crimson centre, reverse of the petals purplish lilac; large, full, and good.

La France. Beautiful pale peach, rose centre; large and full; very free bloomer.

La Reine. Rosy pink, tinged with lilac; very large.

Louis Van Houtte. Reddish scarlet and amaranth, the circumference blackish crimson, shaded; very large, full.

Madame Alice Dureau. Clear rose color; very large, full, and of good form.

Madame C. Joigneaux. Red, shaded with lilac; very large; very double and fine; exquisite foliage, and good habit.

Madame Marie Cirodde. Beautiful clear rosy pink; imbricated; large and full.

Madame Noman. Pure white, blush centre; fine form; medium size; full.

Madame Victor Verdier. Rich bright cherry color; very large, full and fine form, cupped; blooms in clusters.

M'lle Eugenie Verdier. Bright flesh color; large and full; of fine form.

Marquise de Mortemart. Beautiful satin-like white, relieved with delicate flesh color, very clear; large, full.

Prince Camille de Rohan. Crimson maroon, very rich and velvety.

Souvenir de Comte Cavour. Velvety crimson; fine flower, full and large.

Souvenir de la Reine d'Angleterre. Bright rose; large and full; very effective.

The collection of J. C. Chaffin contained the following varieties:

Anna de Diesbach.
Baronne Adolphe de Rothschild.
Duchesse de Caylus.
Duchesse de Morny.
Elie Morel.
Emperor Maximilian.
Fisher Holmes.
Jules Margottin.
Imperatrice Charlotte.
Louisa Wood.
Mad. Boll.
Mad. Bonnaire.
Mad. Charles Wood.
Mad. Marie Cirodde.
Mad. Therese Levet.
Mad. Victor Verdier.
M'lle Annie Wood.
Maurice Bernardin.
Prince Camille de Rohan.
Princess Mary of Cambridge.
President Mas.
Souvenir de William Wood.
Victor Verdier.
Xavier Olibo.

These two collections have been given in full, with descriptions of the first as complete as possible from Paul's catalogue. Of Mr. Chaffin's collection so very few were described that the list is submitted without any attempt at description.

Mr. Parkman's collection contained many varieties mentioned above, and, although the flowers were smaller than either of the other two, was in every other respect equally as good a collection. For the best twelve, the competitors were James McTear, Joseph Clark, and A. McLaren, each of whom exhibited some very fine varieties. For Hardy June Roses there was no competition. For Moss Roses, the competitors were James McTear, Francis Parkman, and A. McLaren, in whose collections there were undoubtedly some very fine varieties, judging from the names and their descriptions in the catalogues, but very many of them did not show the slightest color, which made it extremely difficult to decide as to where the real merit belonged. Of Tender Roses, the exhibitors were E. S. Rand, Jr., James Comley, and A. McLaren, all of the collections being good, but that of Mr. Rand was particularly noticeable, containing many choice kinds. For the general display, Joseph Clark was the only competitor, and the mere mention of his name in this connection is a sufficient guarantee that the collection was of a high order of excellence.

For the special prizes offered by H. H. Hunnewell, the competitors were William Gray, Jr., John C. Chaffin, and Francis Parkman, and probably no finer were ever shown in competition for these prizes. For the best six named kinds the following magnificent varieties were from J. C. Chaffin: Monsieur Boncenne, Duke of Edinburgh, Jean Cherpin, Marie Baumann, Mad. C. Crapelet, and Baronne de Maynard. The best six of William Gray, Jr., were La France, Mad. Victor Verdier, Felix Genero, Edward Morren, Vicomtesse de Vezins, and Alfred Colomb.

The prize for the best twelve of any one variety brought four splendid stands; of Charles Le Febvre and John Hoppin from J. C. Chaffin; of Jules Margottin from Francis Parkman; and of Gen. Jacqueminot from William Gray, Jr.

Greenhouse plants were exhibited by William Gray, Jr., and were in superb condition, as Mr. Gray's plants always are. They were composed of the following species:

Agave schidigera.	*Bonapartea filifera.*
Ananassa sativa variegata.	" *gracilis.*

Bonaparte juncea.	*Phœnix farinfera.*
Cocos coronata.	" *reclinata.*
Livistonia altissima.	*Phormium Colensoi var.*
" *olivæformis.*	*Yucca aloifolia var.*

Although the prize for Stove or Greenhouse Flowering plants is one of the most liberal offered, the competition has never been what might reasonably be expected. E. S. Rand, Jr. exhibited six splendid plants which might please the most fastidious; they were in superb condition, and the best six plants of this class ever shown, — *Huntleya cerina*, *Lælia purpurata*, *Oncidium altissimum Brassia verrucosa*, *Aerides Lobbii*, and *Vanda tricolor.* For Specimen Plant, E. S. Rand, Jr. exhibited a fine plant of *Aerides odoratum.*

Six very fine and handsome Fuchsias were shown by Edward Butler, gardener at Wellesley College. Joseph Clark and J. B. Moore each exhibited exceedingly well grown Gloxinias of unusual merit. For Geraniums, there was much less competition than usual, the only collections exhibited being Variegated Zonales from William Gray, Jr., and James Comley. The interest in native plants seems to be decreasing, Mrs. Horner being the only contributor, with one hundred and ten varieties.

The only Wardian Case was from W. H. Halliday, who exhibited a very handsome one, arranged in his usual good taste. Fern Cases, well filled with choice ferns, were exhibited by W. H. Halliday, J. Warren Merrill, and James McTear.

Herbaceous Pæonies were shown by Francis Parkman and James McTear, and Paisley Pinks by Joseph Clark. Of Summer Herbaceous Plants, choice collections, containing many fine varieties, were shown by Francis Parkman and James McTear. The contributions to the department of Cut Flowers, Baskets of Flowers and Bouquets, which always add so much to the interest of the exhibitions, were fully up to the usual standard, the contributors being James O'Brien, James Comley, James Nugent, James McTear, Mrs. Wood, Mrs. Joyce and Mrs. Gill.

In Ferns, a very interesting collection of *Pellæas* was shown by J. Warren Merrill, comprising the following species:

P. adiantifolia,	*P. falcata*,
P. Bridgesii,	*P. flexuosa*,
P. cordata,	*P. gracilis*,
P. densa,	*P. hastata*,

P. longimucronata,
P. mucronata,
P. ornithopus,
" " var. *brachypterum*,
P. rotundifolia,
P. ternifolia,
P. Wrightiana.

Miscellaneous collections of plants and flowers were shown by different contributors. From W. C. Strong moss roses, Pyrethrums and the *Lilium auratiacum;* a small but choice collection of pot plants by James McTear; and Gloxinias, a very pretty plant of *Trichinium Manglesii*, *Amaryllis vittata*, and cut flowers from J. B. Moore. J. H. Woodford made a splendid display of roses, although not entered for a premium. There were on this stand some of the best flowers ever shown. From Joseph Clark were four vases of flowers which were arranged in a very graceful and tasteful manner; also, a very fine stand of Rhododendrons and Kalmias. J. A. Black contributed a neatly arranged stand of flowers, and James Comley a choice collection of new and rare plants which are mentioned more fully in other parts of this report.

June 27.

The beautiful stand of roses exhibited to-day by Francis Parkman fully sustained his well earned reputation as a successful grower of the rose. It was a superb collection in every respect. We had also, from the same, two cut specimens of *Wistaria frutescens* var. *magnifica*, flowers in dense drooping racemes, of a pale lilac, vigorous and perfectly hardy.

July 2.

Summer Phloxes—a very good collection—were exhibited by James McTear, composed of distinct and fine varieties. The exhibition of cut flowers, bouquets, and baskets of flowers was unusually good, the contributors being James O'Brien, James Nugent, Mrs. Wood, and Mrs. Joyce. Several other persons exhibited smaller collections.

July 11.

Summer Lilies were shown by Herbert Gleason and J. S. Richards; and by George Everett a fine collection of Clematis and *Lilium Brownii* and *L. Thunbergianum*. Miss A. C. Kenrick

showed *Magnolia macrophylla;* Joseph Clark, a splendid single specimen plant of gloxinia, the foliage being unusually fine and the flowers produced in great abundance. W. C. Strong exhibited flowers of *Rhododendron maximum*, gathered by him at Fitzwilliam, N. H., four miles from Mount Monadnock. Native flowers were brought by E. H. Hitchings, viz., *Asclepias purpurascens*, *Calopogon pulchellus*, *Pyrola elliptica;* and a very fine display of cut flowers, baskets, etc., by various contributors.

July 18.

The special feature of the exhibition was the unusually fine display of cut flowers, the most noticeable being the choice and rare flowers from Joseph Clark, arranged as a table design, and occupying the position on the table opposite the door. Another very interesting feature was the collection of new bulbous *Begonias* from James Comley, viz., *B. Veitchii*, a magnificent species, of very neat growth, the flowers large and of a brilliant vermillion red, very distinct and beautiful; Lothair, deep rose, a fine flower; Gem, bright cream color, the reverse of the petals light pink; Corsair, rosy salmon; Magnet, beautiful light pink, the reverse of the petals deep pink; Mazeppa, very bright cream color, the reverse of the petals tinged with orange pink. These belong to the handsome flowered, tuberous rooted section, and are very valuable acquisitions. Mr. Comley showed also a small plant of *Gesnera alba*, a new variety of this old but too much neglected class of plants. From E. S. Rand, Jr., came a small plant of *Aerides Wightianum*, a magnificent species of this beautiful genus of orchids, never before exhibited. Mrs. Horner and E. H. Hitchings each exhibited a very neatly arranged collection of native plants, all properly named and forming a very instructive feature of the exhibition. From Mrs. Southmayd came a plant of the beautiful *Zephyranthes rosea;* from George Everett, the following fine Clematis: Thomas Moore, *fulgens*, *Renaultii cœrulea*, *modesta*, *rubella*, *Viticella rubra grandiflora*, Prince of Wales; and *Lilium excelsum*. From Joseph Tailby, a superb vase of *Lilium auratum*, containing a fine variety of flowers. From Francis Parkman a very fine seedling Delphinium, and a choice collection of Clematis; from John C. Hovey, *Iris Kœmpferi*, and a fine vase of *Aquilegia*

chrysantha; from Mrs. C. N. S. Horner a superb dish of *Nymphæa odorata;* and good collections of cut flowers arranged in stands and vases, from the usual contributors.

July 25.

This was one of the best weekly exhibitions of the season; it being prize day for Orchids, fine plants were shown by E. S. Rand, Jr., of *Zygopetalum maxillare*, *Aerides affine*, and *Epidendrum ciliare*, which were in splendid order and were the feature of the day. From Joseph Clark we had a superb collection of choice flowers arranged with great taste, the most noticeable being *Allamandas*, *Stephanotis floribunda*, *Tabernæmontana*, *Gloxinias*, *Begonias*, and Ferns; indeed they were an exhibition of themselves. James Comley exhibited a very fine lot of cut flowers and pot plants; among the former were fine *Gloxinias*, *Geraniums*, *Begonias*, *Liliums*, Carnations, Ferns, etc. The most noticeable of the plants was a handsome Gloxinia, named Washington; a new Abutilon, August Pasewald; and *Schizolobium excelsum*. James Nugent showed a fine spike of *Lilium auratum*, with fourteen flowers; and George Everett, two dishes of Hollyhocks, *Lilium Bloomerianum*, *Lilium Chalcedonicum* and *L. longiflorum;* also *Chelone barbata Torreyii*, one of the best hardy herbaceous perennials. George E. Davenport brought a small collection of native plants consisting of *Asplenium spinulosum*, *A. spinulosum* var. *dumetorum*, *Phegopteris polypodioides*, *Chimaphila maculata*, *C. umbellata*, *Melilotus alba*, *M. officinalis*, *Goodyera pubescens*, *G. repens* and *Liparis Lœselii*. From C. M. Atkinson came two very fine pans of *Achimenes*, *longiflora major* and Mme. Rendatler. As a summer decorative plant for the conservatory the achimenes has scarcely a rival. The best Hollyhocks that have been shown for years were those magnifient spikes from Joseph Clark; the flowers were very double, of fine shape, and the colors very distinct and good. Mrs. Horner and Miss Carter both exhibited good collections of native flowers; and Hovey & Co. a fine vase of flowers of *Bignonia Chamberlaynii*.

August 1.

The only collection of late Phloxes, was shown by A. McLaren. The new premium offered for the best collection of fifty named

varieties of cut flowers, promises to be one of much value, inasmuch as it will be a great help to any who wish to make collections for themselves, enabling people to take notes of such varieties as may be shown from time to time, and save one year's time waiting to see the results from seeds. The first collections of this kind were shown to-day, by James Comley and James O'Brien. Of Fungi, the contributors were Mrs. Horner and Mrs. Gill. Francis Parkman, showed a very fine *Lilium*, a hybrid between *L. lancifolium* and *L. auratum;* the flower was very large and highly colored, and is a good acquisition to that valuable class of plants. From George Everett, we had *Lilium longiflorum*, fine Hollyhocks, Clematis, *Lythrum roseum superbum* and *Lonicera Halleana*. From A. P. Calder, a large display of Gloxinias, among which, however, there was a great sameness; and from James Comley the following new and rare ferns: *Adiantum Hendersoni*, *Adiantum amabile*, *Davallia Mooreana*, and *Asplenium angissima*.

George E. Davenport and John Robinson exhibited the following native Lycopods collected by them, comprising all the species and *book* varieties growing east of the Mississippi, and north of New Jersey, except the Alpine species, *Selago: L. complanatum*, *L. complanatum* var. *sabinæfolium*, *L. annotinum*, *L. dendroideum*, *L. dendroideum* var. *obscurum*, *L. dendroideum* var. (abnormal form), *L. lucidulum*, *L. inundatum* var. *Bigelovii*, and *L. clavatum*.

August 8.

For premium for Balsams there were several competitors, all the flowers offered being uncommonly good, particularly those from G. A. Law and J. B. Moore. Native plants were shown by George E. Davenport, as follows: *Statice Caroliniana*, *Opuntia vulgaris*, *Goodyera pubescens*, *Lathyrus maritimus*, *Cassia chamæcrista*, *Camptosorus rhizophyllus*, *Scolopendrium vulgare*, and *Aspidium Lonchitis;* a fine vase of Tritomas and Gladiolus from James Nugent; a choice collection of cut flowers, and new Gloxinias Mrs. John Smith and Valerie, from James Comley; and a splendid vase of *Lobelia cardinalis* by William Edwards. From Francis Parkman, *Hemerocallis Kwanso fl. pl.*, Clematis Mrs. C. Nevill, and twenty very fine flowers of *Lilium superbum;* and baskets of flowers from Mrs. Joyce and Mrs. Wood, arranged with choice flowers in their usual good style.

August 15.

The feature of the show to-day was the very fine collections of Native Ferns from J. Warren Merrill and Mrs. C. N. S. Horner.

We regret very much not being able to give a list of Mr. Merrill's collection, as it contained many rare and choice varieties, and probably was unequalled by any collection ever shown; a list of Mrs. Horner's collection, which was also a fine one, is appended:

Adiantum pedatum,
Aspidium acrostichoides,
" *cristatum*,
" *marginale*,
" *Noveboracense*,
" *spinulosum*,
" " var. *Boottii*,
" " " *dilatatum*,
" *Thelypteris*,
Asplenium angustifolium,
" *ebeneum*,
" *Filix-fœmina*,
" *thelypteroides*,
" *Trichomanes*,
Botrychium ternatum,
" " var. *dissectum*,
" " " *lunarioides*,
" " " *obliquum*,
" *Virginicum*.
Camptosorus rhizophyllus,
Cystopteris bulbifera,
" *fragilis*,
Dicksonia punctilobula,
Onoclea obtusiloba,
" *sensibilis*,
Osmunda cinnamomea,
" *Claytoniana*,
" *regalis*,
Polypodium Dryopteris,
" *Phegopteris*,
" *vulgare*,
Pteris aquilina,
Scolopendrium vulgare,
Struthiopteris Germanica,
Woodsia Ilvensis,
" *obtusa*,
Woodwardia angustifolia,
" *Virginica*.

Also *Nephrolepis exaltata*, cultivated, and *Polypodium incanum*, natives of the Southern States; and *Pellæa andromedæfolia*, from Colorado.

August 22.

The great attraction of the day was the Gladiolus. The hall was brilliant with the fine displays of the various contributors; particularly noticeable were the handsomely arranged stands of James Comley, George Craft, and George Everett, in which were very many spikes of flowers of the best English and French varieties, while the fine stands of seedlings, from Herbert Gleason and J. S. Richards, were quite up to the usual standard. It is safe to

say that this splendid display of the Gladiolus has never been equalled. From James Comley were two splendid vases of Gloxinias, new Phlox Mrs. Veitch, and *Lapageria alba*. "The Garden" of 1872 speaks of this plant as now being "a beautiful ornament in the conservatory at the Holme, Regent's Park. It is trained first on a trellis against the wall, and then across the house on a strong cord, about four feet from the roof and ten from the ground, the shoots being allowed to hang gracefully down. On the opposite side is a plant of the old, or crimson kind, which meets and mingles with the shoots of the white one. The effect of the mixture of the variously colored flowers is, as may readily be supposed, very charming. Their beauty is not fully seen when the plants are trained stiffly against walls or trellises; the shoots should be allowed to hang down freely." W. H. Spooner, Jr., exhibited some very fine new Gladioli and two fine vases of *Lilium lancifolium*. From James Nugent came a fine lot of *Lilium auratum*, and a magnificent spike of *Hydrangea paniculata grandiflora*. George E. Davenport contributed the following native plants from the summit of Mount Lafayette, N. H., at an altitude of 4,200 feet: *Lycopodium Selago*, *L. annotinum*, *Arctostaphylos Uva-ursi*, *Diapensia Lapponica* and *Phyllodoce taxifolia*. George E. Osgood contributed a very pretty bouquet of native flowers; W. K. Wood, a stand of seedling petunias; and George Everett new varieties of Phlox and Clematis.

August 29.

Special premiums being offered for Asters, an unusual competition for them was participated in by C. M. Atkinson, J. A. Black, John Parker, John Robinson, James O'Brien, James Nugent, and others. The flowers were very much better than in former seasons, and it was gratifying to note the marked progress that has been made in the cultivation of this beautiful annual; particularly attractive were the fine Washington Asters, of the purest white, from C. H. B. Breck.

The once popular Verbena seems to have lost ground of late years, if we may judge from what are exhibited as the seasons come around; the only contributors were J. O'Brien and J. B. Moore for the general collection; and for the named collection no contributions were offered. W. H. Spooner exhibited a very fine collection of choice named varieties of Gladioli; Joseph Tailby

and James Nugent, vases of *Lilium auratum;* and Herbert Gleason, a fine vase of *Tritoma Uvaria*. From Francis Parkman came *Hibiscus palustris*, and a seedling from the same; the flower being very large and white it will be valuable to grow by the side of its parent. Two very nice collections of native plants were from Mrs. Horner and Miss Carter; a collection of fine named varieties of Gladioli from W. C. Strong; from Waldo O. Ross, a fine plant of *Rochea falcata;* and a very fine display of bouquets, baskets of flowers and cut flowers from Miss A. C. Wheeler, Miss S. W. Story, J. A. Black, James Comley and others.

September 5.

The competition for the prizes for Zinnias, which has generally been quite spirited, was much less than usual; the only exhibitors were G. A. Law, Joseph Clark, and James Nugent, and the flowers were not up to the usual standard. For the fifty named varieties of Cut Flowers, C. M. Atkinson and James O'Brien each showed two fine stands. Native plants were exhibited by Mrs. Horner, who has represented this department in a very faithful manner all through the season, and on this occasion exhibited a very nice collection, arranged in good taste, and neatly labelled. Joseph Clark again exhibited a very handsome table design, arranged in excellent taste, and E. S. Rand, Jr., *Tapeinotes Carolinæ*. The following notice of this plant from "The Garden," for November, 1873, will be of interest to all. "This is one of the most beautiful of all stove flowering and foliage plants, and it deserves to be more generally cultivated than it is. It has also an interesting and melancholy history connected with it, having been discovered and named by the late Emperor Maximilian, an accomplished botanist, who, being struck by the beauty of the plant, named it in honor of his unfortunate consort, the Empress Caroline. Its foliage is olive green above, slightly hairy, and shining as if varnished, while below the leaves are vivid purple. It flowers nearly all the year round, and bears blossoms of snowy whiteness, not unlike those of a gloxinia in shape, but with the mouth curved upwards. It grows very freely in an ordinary plant stove and delights in a fresh, open, peaty compost, and a humid atmosphere. When not in flower it is highly ornamental on account of its foliage, which has a metallic lustre not found in any gesneraceous plant with which we are

acquainted." Mr. Rand also showed handsome flowers of the beautiful blue water lily *Nymphæa cærulea*. No one probably knows how to grow asters better than John Robinson, and the fine display of handsome flowers shown by him added much to the attractions of the day. Fine spikes of *Hydrangea paniculata* were shown by A. P. Calder; beautiful Clematis and choice herbaceous flowers by Francis Parkman; and some splendid stands of Gladioli from W. H. Spooner and George Craft; fine Dahlias from Macey Randall and George Everett; a fine plant of Crinum Josephine from J. A. Greenlaw; from Joseph Clark a splendid stand of Hybrid Perpetual roses which filled the hall with their delightful fragrance; cut flowers, baskets of flowers, bouquets and table designs were shown in unusual number by various contributors. This was one of the best of the weekly exhibitions, the hall being well filled with the choicest of Flora's productions, and with it closes one of the most successful seasons of weekly exhibitions ever held.

ANNUAL EXHIBITION.

September 15, 16, 17 and 18.

This grand show, which is always looked upon as the event of the season, fully met the expectations of all. If we were to measure plants by the yard there was not so much to be seen as last year, but it has been generally conceded to be far in advance of any ever held as to quality and rarity of the plants and flowers. The arrangement of the hall was somewhat changed from that of last season, although on the main floor the appearance was not materially altered. In the centre of the hall a fountain was placed, around which were arranged some choice evergreens and other plants. The front of the platform was completely hidden by as fine a show of Gladioli as was ever made here. The cut flowers were placed in the balcony, at the end opposite the platform, which was a great improvement on the place assigned them last season under the balconies on the lower floor; as they were arranged the effect was very fine. We thought that it would be hard to excel the splendid exhibition of 1873, but it certainly is not exaggeration to say that that of the last season fully equalled it. Nearly all the visitors to the hall availed themselves of the

view from the balconies, where the whole scene could be witnessed in all its beauty. So entertaining and interesting was this beautiful sight, that the spectators left with much reluctance.

We shall always owe a debt of gratitude to those gentlemen who so constantly contribute their choicest plants and flowers to our exhibitions, and whose constant and generous support has done so much to bring our society up to its present high standard of usefulness and influence, which is second to none on this continent, if in the world. Who can tell the influence of these exhibitions on the great mass of people who visit the halls each year, and what can be more refining and elevating than to engage in the culture of these beautiful gifts which our Heavenly Father bestows upon us to make happy our pilgrimage here below, and what pursuit can one be engaged in that is more calculated to draw the mind of the creature to the Creator, the great giver of all? for he has told us that even Solomon in all his glory was not arrayed like one of these. May the same enthusiasm and spirit which has made these exhibitions so successful not only ever exist but constantly increase.

Of Greenhouse Plants, rare and choice collections were shown by William Gray, Jr., Hovey & Co., and F. L. Ames, comprising many well grown specimens. In Mr. Gray's collection were fine plants of *Bonapartea gracilis*, *juncea*, and *filifera*, *Chamædorea elegantissima*, *Dracæna arborea*, *Phœnix reclinata*, *Latania borbonica*, *Cocos plumosa*, *Chamærops excelsa*, and *Agave univittata*. Most prominent in the collection of Hovey & Co. were superb specimens of *Chamærops Fortunei*, *Cocos coronata*, *Pandanus reflexus*, *P. elegantissimus* and *Dracæna Veitchii*, the last a noble specimen, at least fifteen feet high. In Mr. Ames' collection were some of the best grown plants it has been our fortune to witness; especially so were the *Marantas*, *Agaves*, and *Latanias;* indeed all the plants in this collection were in a remarkably fine condition, and showed that they had received the very best of care.

Specimen plants, not variegated, were exhibited by William Gray, Jr., who showed a fine *Yucca recurva*, and Hovey & Co., who presented a splendid plant of *Pandanus Vandermeerschi*. For Specimen Flowering Plants, there was a finely trained plant of *Stigmaphyllon ciliatum*, a very handsome climbing plant, which, when covered with its bright clusters of flowers, is a very charming object, contributed by Joseph Clark; and from Hovey & Co., a fine *Allamanda Hendersoni*. Of Variegated Leaved Plants, fine

specimens were shown by Hovey & Co., William Gray, Jr., and James Comley. Probably no finer variegated plants were ever shown than Mr. Comley's; they were very distinct and handsome plants, of the following species: *Abutilon niveum maculatum*, *Dracœna Chelsoni*, *Croton Veitchii*, *C. Weismanni*, *Phormium Colensoi*, and *Dieffenbachia Bausei*. The English catalogues and papers mention these plants in the highest terms. The prize for the best specimen Variegated Plant was awarded to a magnificently trained *Cissus discolor*, from F. L. Ames, which was an object of more than usual attraction, and the second to William Gray, Jr. for *Phormium Colensoi var.* Caladiums were shown by Hovey & Co. and F. L. Ames, and although the plants were not as large as some that have been shown in former seasons, they were better grown, and the varieties were more distinct. The beautifully diversified markings of their leaves, combined with their comparatively easy culture, render these plants valuable for decorative purposes.

Ferns: These deservedly popular plants, which always form one of the most attractive features of the exhibition, were in the best possible condition. William Edgar, gardener to Ex-Governor Claflin, exhibited the following fine collection: *Adiantum Farleyense*, *A. cuneatum*, at least five feet in diameter; *A. formosum*, a splendid specimen; *A. concinnum*, *A. amabile*, very graceful; *Gleichenia Speluncæ*, *Pteris serrulata major magnifica*, *P. umbrosa*, *Cyathea princeps*, a very handsome plant; *C. regale*, *Gymnogramma calomelanos* and *G. Peruviana argyrophylla*.

From J. Warren Merrill came a superb collection, among which, although the plants were not as large as the ones just mentioned, there were some rare varieties, and, for young plants, these were very handsome and exceedingly well grown. The collection consisted of *Adiantum scutum*, *Cibotium Schiedei*, very fine; *Davallia ornata*, a fine, well grown plant; *Dicksonia antarctica*, a handsome specimen; *Dictyogramma Japonica*, new, and a splendid specimen; *Gymnogramma Wettenhallania*, *Lygodium circinale*, trained to a trellis seven feet high, and a superb specimen plant; *L. scandens*, trained in the same manner; *L. palmatum*, a very fine plant and one of the best ever exhibited; *Notholæna rufa*, new; *Polypodium cuspidatum*, new; and *Pteris tricolor*. In addition to those already mentioned were many new and rare varieties, all of them in the best possible condition.

For the prize for six ferns, Joseph Clark and J. W. Merrill were the competitors. In the collection of Mr. Clark were excel-

lent specimen plants of *Lygodium scandens*, *Adiantum trapeziforme*, *A. macrophyllum*, *A. cardiochlæna*, *Hypolepis distans* and *Lomaria gibba*. The collection of Mr. Merrill also contained many choice varieties; no one of late years has paid more attention to ferns than this gentleman, who is the fortunate possessor of one of the best collections it has been our pleasure to see. Tree Ferns were shown by Hovey & Co. and Walsh Brothers.

The only collection of Dracænas was from Hovey & Co., and it was unusually good, the varieties being very distinct and fine; these are among the most indispensable plants for decorative purposes where variety is sought. The plants shown were *D. stricta*, *ferrea*, *Cooperi*, *latifolia*, *terminalis*, and *nigro-rubra*.

Of Palms, two splendid collections were shown by Hovey & Co. and William Gray, Jr.; that of Hovey & Co., contained some very large and handsome specimens, and although Mr. Gray's plants were not as large they were well grown and a very fine collection. Without doubt these were the two best collections of palms ever on exhibition here.

Agaves: Of late years, considerable attention has been given to this highly ornamental class of plants, which are so well adapted to adorn any place, from the smallest greenhouse to the largest conservatory, and for decorating lawns are certainly unequalled. The collections of Hovey & Co. and C. S. Sargent were unusually fine; indeed it was very difficult to decide between the two, they being in many respects so nearly alike, and both containing many choice and new varieties.

Of Succulents, carefully chosen collections from Louis Guerineau, Hovey & Co., and John C. Hovey were on exhibition and were novel and interesting. Probably no class of plants of recent introduction has proved more useful than these, which are valuable either as pot plants or for decorative purposes. The *Echeveria*, for bedding, can hardly be equalled, being well adapted to dry situations, and proving to be what is wanted where others would fail. These very interesting collections constituted one of the most attractive features of the exhibition. Of Cacti, good collections containing many specimens of rare and choice varieties were shown.

For the best New Pot Plant, a new Palm, *Cocos Weddelliana*, was exhibited by C. S. Sargent; it is a dwarfer growing variety than some of the palms, and said to be very valuable for decorative purposes.

Gladioli were never shown in better condition; their great variety of color, and delicate markings make them objects of great attraction. W. H. Spooner and George Everett exhibited splendid stands of fine named varieties, while the seedlings of George Craft have never been equalled. Dahlias were shown by George Everett, James Comley, and Macy Randall; the new varieties from Mr. Everett and Mr. Comley were of unusual excellence, and showed that a great advance had been made in this old but favorite flower.

When we say of Bouquets, that James Nugent, James O'Brien, and Mrs. S. Joyce were the contributors to this department, it is enough to satisfy all that the productions were fully up to the standard this department has always maintained.

In Baskets of Flowers, the ladies did themselves great credit, and while we know that these have always been one of the attractive features of the exhibitions, it is not too much to say that there has been a decided improvement in this direction the past season. The contributors were Mrs. Wood, Mrs. Joyce and Mrs. Gill.

Table Designs were exhibited by Joseph Clark, Mrs. Wood and Miss S. W. Story; these have always been got up in excellent taste, but the beautiful design of Mrs. Wood deserves more than a passing notice. The stand itself was of glass with a flat receptacle below, and trumpet shaped vases rising from it, the lower part being filled with heavier flowers and the vases with lighter ones; the flowers were arranged in excellent taste, each one seemed in its proper place, and a more graceful and handsome design was never exhibited.

Miscellaneous Plants and Flowers: Louis Menand, of Albany, N. Y., one of the oldest florists in the country, filled two stands with choice and rare plants; among them were fine specimens of the following plants:

Agave Bessereriana,
" *dealbata nana*,
" *Verschaffelti*,
" *Xalapensis variegata*,
Araucaria Bidwillii,
" *Cookii*,
Bonapartea glauca,
" *histrix compacta*,
Cyathea dealbata,
Eurya latifolia variegata,
Hechtea Ghiesbreghtii,
Phalœnopsis grandiflora aurea,
Polystichum angulare Wollastoni,
Retinispora lycopodioides,
" *nana*,
Stenocarpus Cunninghami,
Yucca tricolor,
Zamia Lehmanni,

Of that magnificent orchid, *Phalænopsis grandiflora aurea*, Mr. Williams says, "This is certainly the grandest of the many varieties of this fine orchid. It is a variety that bloomed among several hundred I imported from Borneo; the sepals and petals are unusually broad, and rounded, and the lip is conspicuously marked with deep orange. It is a compact growing plant with light green foliage."

From H. H. Hunnewell came a magnificent collection of Conifers, such as has never been shown before; many of them were new and rare plants; each one was a splendid specimen of its kind, and was alone worth a visit. A list of the species is given in full, it being impossible to select one more worthy than another.

Araucaria Bidwillii,
" *Cooki*,
" *imbricata*,
Biota elegantissima,
" *intermedia*
Cephalotaxus drupacea,
Cryptomeria elegans,
" *Japonica gracilis*,
" New Japan,
Cupressus Lawsoniana argentea,
" " *aurea*,
" " *erecta viridis*,
" " *gracilis*,
" " *thyoides aurea*,
Juniperus Chinensis aurea,
" Duchesse d'Orleans,
" *Japonica alba variegata*,
" *Japonica aurea*
Osmanthus illicifolius variegata,
Retinispora decussata,
" *filicoides*,
" *filifera*,
" *Keteleeri*,
" *filiformis*,
" *lætevirens*,
" *leptoclada*,
" *obtusa*,
Retinispora obtusa alba variegata,
" " *aurea*,
" " *aurea variegata*,
" " *gracilis*,
" " *nana*,
" *pisifera*,
" " *aurea*,
" *plumosa*,
" " *argentea*,
" " *aurea*,
" *selaginellaoides*,
" *squarrosa*,
Sciadopitys verticillata,
Taxus baccata aurea,
" *Hibernica*,
Thuja falcata,
" George Peabody,
" *gigantea*,
" *Japonica*,
" *nana*,
" *plicata*,
" *semper aurea*,
" Tom Thumb (Barry's),
" " " (Parsons'),
" *Victoria*,
" *Yuccariana*,
Thujopsis dolabrata,
" " *variegata*,
" *Standishii*,

From James Comley came a choice collection of new and rare plants, as follows:

Adiantum amabile,
" *Hendersoni*,
" *Peruvianum*,
Asplenium angissima,
" *viviparum*,
Caladium Donizetti,
" Duchartre,
" Princess Alexandra,
Croton aucubæfolium,
" *fuscatum*,
" *interruptum*,
" *irregulare*,
Croton undulatum,
" *Veitchii*,
" *Weismanni*,
Dracæna amabilis,
" *metallica*,
" *nigro-stricta*,
" *rubra-elegans*,
" *Shepherdii*,
" *Youngii*,
Maranta Makoyana,
" *Seemanni*.

In addition to the new plants just named, Mr. Comley sent a fine collection, conspicuous among which were many well-grown specimens of good standard varieties of Ferns, Caladiums, Marantas, and other well known plants. No one has done more than Mr. Comley to sustain the interest of the exhibitions, and the Committee feel it due to him to mention that fact at this time, with the hope that it may always so continue. From Hovey & Co. there was a fine collection of miscellaneous plants, the most noticeable being some very fine Crotons and splendid varieties of Coleus, a new Golden Variegated Hydrangea, *Eurya latifolia*, a fine shrub for the lawn; *Gustavia Braziliensis*, *Ficus Cooperi*, and *Todea barbara*, the last imported fifteen years ago, and, Mr. Hovey says, now exhibited for the first time.

From L. Guerineau came a splendid plant of *Peristeria elata*, with one hundred and fifty-six buds and flowers; and native plants from Mrs. C. N. S. Horner; a splendid stand of Hybrid Perpetual roses from Joseph Clark; Flower Garden Designs, very neatly arranged, from Richard Allison, James Leister and Henry Youell; from E. H. Titus a very neatly arranged rustic stand of fifteen varieties of native ferns in a very healthy state; and from James McTear *Desmodium pendulæflorum*, a new hardy shrub. A fine collection of plants came from Walsh Brothers, but no list was handed to the Committee; from the same, two good plants of *Lomaria gibba; Lapageria alba* from J. B. Moore; Cockscomb, from seed obtained in 1873 from the Garden of Gethsemane, out-

side the city of Jerusalem, by Robert Murray; superb Marechal Neil roses, from Joseph Tailby; and fine displays of cut flowers, designs, and plants by various contributors.

October 10.

E. S. Rand, Jr. had on exhibition another of his beautiful orchids, *Vanda Bensoni*, of which Mr. Williams says: "It is a very nice addition to this beautiful genus. A native of Rangoon; it belongs to the *V. Roxburghii* section. A free grower, producing in its native country spikes eighteen inches long, with flowers two inches in diameter, white on the outside and greenish yellow, dotted with reddish brown, on the inside; lip white and violet color." Native ferns came from Mrs. C. N. S. Horner; *Nerine corusca* from James McTear; *Vallota purpurea* from George N. Noyes; a very neatly arranged fern case from George E. Davenport; Dahlias from James Comley and George Everett; and baskets and dishes of flowers from Mrs. Wood and Mrs. Joyce.

October 17.

Orchids were again the principal feature, E. S. Rand, Jr. exhibiting *Lælia Perrinii* and *Epidendrum altissimum*, two well known varieties. Hovey & Co. showed *Maxillaria picta*, a very pretty, free flowering variety, with yellow and white flowers; *Cattleya Loddigesii*, a free flowering species, from Brazil; the flowers of a pale rose color, tinged with lilac, the lip of a light rose, marked with yellow; also, *Epidendrum cochleatum*, a pretty variety having purple flowers, and a native of the West Indies. Handsomely arranged bouquets were placed on the tables by James Comley and James O'Brien, and baskets of flowers by Mrs. Wood and Mrs. Joyce.

October 24.

Two of the finest orchids we have seen were on exhibition to-day from E. S. Rand, Jr. Although very frequent notice has been made of these beautiful plants, we cannot refrain from speaking particularly of these. The first was *Cattleya pumila*, a lovely species from Brazil; flower rich rose with deep purple lip shading to deep orange, with a white margin. The plant could almost be put

in the vest pocket, yet the flower was three inches in diameter. The second, *Stanhopea Martiana*, had fourteen flowers, white, shaded with lemon, and beautifully spotted with reddish purple. It is a native of Mexico.

October 31.

E. S. Rand, Jr. exhibited *Miltonia candida*, a very pretty species from Brazil, with seven spikes of flower; and *Pleione maculata*, a very pretty small growing plant with small buds; the flowers are a delicate white; lip of the same color, barred with crimson, and lasting some three weeks in perfection. Its native place is the Khoosea Hills.

CHRYSANTHEMUM SHOW.

November 7.

This show did not by any means come up to the standard that ought reasonably to be expected from the liberal amount of prizes offered, the only exhibitor of plants in pots being C. M. Atkinson, with six well grown varieties of Pompons. Cut flowers of Chrysanthemums were exhibited by James McTear, James Nugent, and C. M. Atkinson; in their stands were many good varieties of various colors. E. W. Wood exhibited twenty-five pots of Pompon and large flowering varieties grown as standards. This way of growing the chrysanthemum is not generally practised, but it is certainly a very pretty style, particularly for decorative purposes. In England it has become very popular, and by reference to the "Gardener's Magazine" for March, 1873, can be found some excellent hints as to this mode of culture. Certainly the chrysanthemum is one of the most useful fall flowers, and the wonder is that it receives so little attention. We hope that in future, instead of there being only one or two stands of plants, the hall will be filled, and that an exhibition worthy of the society will be held.

Baskets of flowers were shown by Mrs. Joyce, Mrs. Wood, Miss S. W. Story, and James Comley; all of them were very beautifully arranged with choice flowers and ferns. A fine plant of *Nerine corusca*, with five spikes of flower, was shown by James McTear. From James Comley were two plants of *Lapageria*

alba; the beautiful *Lasiandra floribunda* by Mrs. Gill; rare native ferns by George E. Davenport; and two very handsome orchids from E. S. Rand, Jr., *Cattleya Walkeriana*, a beautiful dwarf species from Brazil; and *Ansellia Africana*, a fine free flowering orchid; the flowers are of a pale yellow, spotted with dark brown; lip yellow. It will keep in beauty for a long time. Mr. B. S. Williams, in his "Manual," says he has seen over one hundred flowers on a spike.

November 14.

Very handsomely arranged baskets of flowers were shown by Mrs. Joyce and Mrs. Wood, and a choice collection of cut flowers by James Comley.

November 21.

Charles S. Sargent exhibited *Agave schidigera*, with a spike of flowers some six feet high. Curtis' "Botanical Magazine" says, "This remarkable plant was introduced into Europe from Mexico by Mr. Verschaffelt, of Ghent, in 1861; and as a species, M. Lemaire states that it is so very closely allied to *A. filifera* that he was at first disposed to regard it as a variety of that plant." The specimen exhibited was a very handsome one, and is supposed to be the first that has flowered in this country.

Hovey & Co. exhibited the following orchids: *Lycaste Skinneri*, *Zygopetalum Mackayi*, and a handsome plant of *Cypripedium insigne* with twenty buds and flowers; James Comley *Bouvardia umbellata carnea;* and C. V. Woerd *Bouvardia Humboldtii.*

All which is respectfully submitted in behalf of the Committee.

JOHN G. BARKER, Chairman.

PRIZES AND GRATUITIES AWARDED FOR PLANTS AND FLOWERS.

January 3.

Gratuities:—

To James O'Brien, for Seedling Cyclamen,	$1 00
James Comley, for choice Cut Flowers,	2 00
Miss. S. W. Story, for Basket of Flowers,	2 00
Mrs. A. D. Wood, " " "	2 00
Mrs. E. M. Gill, for Dish of Flowers	1 00

January 10.

Gratuities:—

To J. B. Moore, for Cut Flowers,	1 00
James O'Brien, for Cyclamens,	2 00
Mrs. S. Joyce, for Sparaxis,	1 00
Hovey & Co., for *Cattleya Trianæ*,	1 00
Joseph Tailby, for *Primula filicifolia*,	2 00
Mrs. A. D. Wood, for Basket of Flowers,	2 00
Mrs. S. Joyce, " " "	2 00

January 17.

Gratuities:—

To James O'Brien, for Cyclamens,	1 00
Joseph Tailby, for Primulas,	2 00
James Comley, for Cut Flowers,	1 00
Mrs. A. D. Wood, for Basket of Flowers,	2 00
Mrs. S. Joyce, " " "	2 00

January 24.

Gratuities:—

To C. B. Gardiner, for Cyclamens,	2 00
James Comley, for Cut Flowers,	3 00
John B. Moore, " " "	3 00
E. S. Rand, Jr., for *Gesnera bulbosa*,	4 00
" " " Orchids,	1 00

To Mrs. S. Joyce, for Basket of Flowers, . . . $1 00
Mrs. E. M. Gill, for " " . . . 2 00
Mrs. A. D. Wood, for " " . . . 2 00
Joseph Tailby, for Primulas, ... 1 00
P. C. Hubbard, for *Cypripedium insigne*, . . . 1 00

JANUARY 31.

Gratuities:—

To Mrs. A. D. Wood, for Basket of Flowers, . . . 2 00
Mrs. S. Joyce, " " " . . . 2 00
Mrs. E. M. Gill, " " " . . . 2 00
James Comley, for Cut Flowers, ... 3 00
Hovey & Co., for Orchid, ... 2 00
J. B. Moore, for Azalea, ... 2 00
James O'Brien, for Cyclamens, ... 3 00

FEBRUARY 7.

Gratuities:—

To James Comley, for Azaleas, ... 2 00
J. B. Moore, for Plants in pots, ... 4 00
Mrs. S. Joyce, for Basket of Flowers, . . . 2 00
Mrs. A. D. Wood, for " " . . . 2 00
Mrs. E. M. Gill, for " " . . . 2 00

FEBRUARY 14.

Gratuities:—

To E. S. Rand, Jr., for *Lælia peduncularis*, . . . 5 00
James Comley, for new Azaleas, ... 4 00
" " " *Bouvardia Vreelandii*, . . . 2 00
George E. Davenport, for Walking Fern, . . 1 00
Mrs. E. M. Gill, for Dish of Flowers, . . . 2 00
Mrs. S. Joyce, " " " . . . 2 00

FEBRUARY 21.

Gratuities:—

To E. S. Rand, Jr., for rare Orchids, ... 5 00
Mrs. S. Joyce, for *Amaryllis fulgida*, . . . 2 00
" " " for Basket of Flowers, . . . 2 00
Mrs. E. M. Gill, for " " 2 00
J. H. Woodford, *Amaryllis vittata*, ... 1 00

To C. B. Gardiner, for Cyclamens, ... $2 00
James O'Brien, " " 3 00
Hovey & Co., for Pot Plants, ... 4 00
James Comley, for Cut Flowers, ... 2 00
J. B. Moore, " " 1 00
Mrs. A. D. Wood, for Basket of Flowers, . . 2 00

FEBRUARY 28.

Gratuities:—

To Mrs. C. N. S. Horner, for Native Flowers, . . 2 00
Mrs. A. D. Wood, for Dish of Flowers, . . . 2 00
Mrs. S. Joyce, " " " . . . 2 00
Mrs. E. M. Gill, for Basket of Flowers, . . . 2 00
J. B. Moore, for Amaryllis, ... 2 00
E. S. Rand, Jr., for rare Orchids, ... 4 00
Hovey & Co., for Cut Flowers, ... 2 00
James Comley, for new Azaleas, ... 4 00
A. W. Felton, for Hybrid Perpetual Rose, . . 1 00

MARCH 7.

GREENHOUSE PLANTS.—For the best six in bloom, to Hovey & Co., ... 20 00
CYCLAMENS.—For the best six in pots, to James O'Brien, 6 00
CAMELLIAS.—For the best display of named varieties, cut flowers, not less than twenty blooms, to Hovey & Co. 6 00

Gratuities:—

To Hovey & Co., for Primulas, ... 2 00
" " " Cut Flowers, ... 1 00
Mrs. A. D. Wood, for Basket of Flowers, . . 2 00
" " " " Pot Plants 3 00
Mrs. E. M. Gill, for *Lycopodium denticulatum*, . . 1 00
" " " " Basket of Flowers, . . . 2 00
Mrs. S. Joyce, " " " . . . 2 00
James Comley, for Table Design, ... 2 00
" " " Cut Flowers, ... 2 00
James Cartwright, for *Dendrobium nobile*, . . 3 00
E. S. Rand, Jr., for Orchid, ... 2 00
James Gray, for Cinerarias, ... 6 00
Marshall P. Wilder, for Azaleas, ... 2 00

To C. B. Gardiner, for Cyclamens, ... $1 00
G. A. Law, for Hyacinths, ... 1 00
James O'Brien, for Primulas, ... 2 00

March 14.

Gratuities:—

To James Comley, for Plants and Flowers, . . . 5 00
James Cartwright, for Hybrid Perpetual Roses, . 1 00
Hovey & Co., for Camellias, ... 1 00
Francis Putnam, for Amaryllis, ... 1 00
E. S. Rand, Jr., for *Cypripedium Harrisianum*, . 2 00
C. M. Atkinson, for a fine specimen plant of *Kennedya Comptoniana*, ... 3 00
Mrs. E. M. Gill, for Basket of Flowers, . . . 2 00
Mrs. S. Joyce, for " " . . . 2 00
Mrs. A. D. Wood, for " " . . . 2 00

March 21.

Gratuities:—

To Mrs. E. M. Gill, for Basket of Flowers, . . . 2 00
Mrs. A. D. Wood, for " " . . . 2 00
John B. Moore, for Standard Azalea, . . . 3 00
James Grey, for Cinerarias, ... 5 00
George E. Davenport, for Native Plants, . . 1 00
C. W. Jenks, for Hyacinths, ... 1 00
Mrs. S. Joyce, for Basket of Flowers, . . . 2 00
James Comley, for Cut Flowers, ... 2 00
Francis Putnam, for Seedling Amaryllis, . . 1 00
Marshall P. Wilder, for Azaleas, ... 2 00
James McTear, for *Lychnis Lagascæ*, . . . 1 00
E. S. Rand, Jr., for fine *Dendrobium*, . . . 4 00
Hovey & Co., for Camellias and Azaleas, . . 3 00

March 28.

Gratuities:—

To William Gray, Jr., for Azaleas, ... 3 00
E. S. Rand, Jr., for *Dendrobium macrophyllum*, . 3 00
Mrs. E. M. Gill, for Basket of Flowers, . . . 2 00
Mrs. S. Joyce, " " " . . . 2 00
James Comley, for collection of Plants, . . . 5 00

April 4.

Gratuities:—

To Mrs. A. D. Wood, for Basket of Flowers,	$2 00
Mrs. S. Joyce, " " "	2 00
John B. Moore, for Cut Flowers,	1 00
James Comley, " " "	2 00
Hovey & Co., " " "	1 00
E. S. Rand, Jr., for rare Orchids,	3 00
Hovey & Co., for Tricolor Geraniums,	2 00

April 11.

Gratuities:—

To Mrs. A. D. Wood, for Basket of Flowers,	2 00
Mrs. S. Joyce, " " "	2 00
Mrs. E. M. Gill, " " "	2 00
James McTear, for Bouquet,	1 00
William Gray, Jr., for Pelargoniums,	2 00
James Comley, for Pot Plants,	4 00
Hovey & Co., for Cut Flowers,	1 00
E. S. Rand, Jr., for *Vanda tricolor*,	5 00
C. M. Atkinson, for *Chorizema Lawrenciana*,	5 00

April 18.

Gratuities:—

To Jackson Dawson, for *Lilium auratum*,	2 00
" " for *Pictairnia* sp.,	2 00
James McTear, for Bouquets,	2 00
Mrs. A. D. Wood, for Dish of Flowers,	2 00
Mrs. E. M. Gill, for Basket of Flowers,	2 00
Mrs. S. Joyce, " " "	2 00
James Comley, for choice Cut Flowers,	4 00
J. H. Woodford, for Cut Flowers,	1 00
John B. Moore, " " "	1 00
Francis Putnam, " " "	1 00
E. S. Rand, Jr., for rare Orchids,	4 00

AZALEA EXHIBITION.

April 25.

Indian Azaleas—For the best six named varieties, in pots, to Marshall P. Wilder,	$25 00
For the third best, to Hovey & Co.,	15 00
Polyanthus.—For the best six distinct varieties, in pots, to C. M. Atkinson,	4 00
For the second best, to C. M. Atkinson,	3 00
Hanging Baskets.—The plants to have been growing in them at least one month.	
For the best specimen, to James McTear,	5 00
Baskets of Flowers.—For the best arranged, to Mrs. A. D. Wood,	4 00
For the second best, to Miss S. W. Story,	3 00
Gratuities:—	
To E. S. Rand, Jr., for *Cattleya Skinneri*,	2 00
James McTear, for Bouquets,	4 00
William Gray, Jr., for Geraniums,	5 00
Jackson Dawson, for Amaryllis,	1 00
C. M. Atkinson, for Pansies in Pots,	3 00
E. L. Sturtevant, for Crinum,	1 00
Mrs. E. M. Gill, for Table Design,	2 00
Mrs. C. W. Jaquitte, for Pelargonium,	1 00
Mrs. C. N. S. Horner, for Native Plants,	1 00
W. K. Wood, for Petunias and Verbenas,	2 00
John B. Moore, for Cut Flowers,	2 00
James Comley, " " "	3 00
Hovey & Co., " " "	1 00
James Comley, for collection of Plants,	3 00
J. B. Moore, " " "	2 00

May 2.

Gratuities:—	
To Mrs. A. D. Wood, for Basket of Flowers,	2 00
Mrs. E. M. Gill, " " "	2 00
Mrs. S. Joyce, " " "	2 00
J. H. Woodford, for *Tropæolum Jarrattii*,	1 00

To J. O'Brien, for Azaleas, ... $1 00
Miss M. E. Carter, for Native Flowers, . . . 1 00
Miss S. W. Story, for Cut Flowers, ... 1 00
James McTear, for Bouquets, ... 2 00
John Parker, for Geraniums, ... 1 00

May 9.

Gratuities:—

To J. H. Woodford, for *Sida mollis*, ... 1 00
James Comley, for Gloxinias, ... 3 00
James McTear, for Bouquets, ... 3 00
E. H. Hitchings, for Native Flowers, . . . 1 00
E. S. Rand, Jr., for *Stanhopea eburnea*, . . . 2 00
" " " for a fine display of *Cattleya Mossiæ*, 6 00
Miss S. W. Story, for Cut Flowers, ... 1 00
James Comley, " " " 3 00
John B. Moore, " " " 2 00
Mrs. A. D. Wood, for Basket of Flowers, . . 2 00
Mrs. S. Joyce, " " " . . . 2 00
James O'Brien, for Azaleas, ... 5 00
D. B. Wooley, for Geranium, ... 1 00

May 16.

Spring Herbaceous Plants.—For the best display of named species and varieties, one bottle of each variety, to James McTear, ... 6 00
Baskets of Flowers.—For the best arranged, to Mrs. A. D. Wood, ... 4 00
For the second best, to Mrs. S. Joyce, . . . 3 00

Gratuities:—

To James Comley, for Shrubby Calceolarias, . . . 2 00
Mrs. S. Joyce, for *Crinum longiflorum*, . . . 1 00
Joseph Clark, for *Rulingia hermanniæfolia*, . . 2 00
Miss Anna E. Kenrick, for Magnolias, . . . 1 00
Jackson Dawson, for Plants, ... 1 00
E. S. Rand, Jr., for rare Orchids, ... 6 00
Mrs. C. N. S. Horner, for Native Flowers, . . 3 00
W. E. Davenport, " " " . . . 1 00

To George E. Davenport, for Cut Flowers,	$1 00
James Comley, " " "	3 00
Miss S. W. Story, " " "	2 00
James McTear, " " "	3 00
W. K. Wood, " " "	1 00
Mrs. E. M. Gill, for Table Design,	2 00
C. M. Atkinson, for Tulips,	2 00
George N. Noyes, for Hyacinths,	1 00

OPENING EXHIBITION.

June 6.

Calceolarias.—For the best six varieties, in pots, to Joseph Clark,	8 00
Tree Pæonies.—For the best six named varieties, to Marshall P. Wilder,	5 00
Cut Flowers.—For the best display, filling 150 bottles, to James Comley,	6 00
For the third best, to James McTear,	4 00
Baskets of Flowers.—For the best arranged, to Mrs. S. Joyce,	3 00
For the second best, to Mrs. A. D. Wood,	2 00
Bouquets.—For the best pair of Parlor Bouquets, to James McTear,	4 00
For the best pair of Hand Bouquets, to James Nugent,	3 00
For the second best, to James McTear,	2 00
Hardy Shrubs.—For the best display, to Miss S. W. Story,	5 00
Native Plants.—For the best display of named species and varieties, one bottle of each, to Mrs. C. N. S. Horner,	4 00
Gratuities:—	
To E. S. Rand, Jr., for rare Shrubs,	2 00
George E. Davenport, for Native Flowers,	3 00
James Comley, for Gloxinias and Cut Flowers,	5 00
Frank Lemme, for Pansies,	1 00
James McTear, for Pot Plants,	2 00
Joseph Clark, " "	2 00

To B. D. Hill, for Tulips, ... $2 00
G. A. Law, " " 2 00
Thomas Tapper, for Aquilegias, ... 1 00
Francis Parkman, for rare Herbaceous Plants, . . 4 00
James Nugent, for Cut Flowers, ... 2 00
John B. Moore, " " " 2 00
W. K. Wood, " " " 1 00
Marshall P. Wilder, for Pæonies, ... 4 00
Joseph Clark, for Vase of choice Flowers, . . 2 00
J. S. Richards, for Vase of Flowers, . . . 1 00
Marshall P. Wilder, for Achimenes, . . . 1 00
Miss A. C. Wheeler, for Table Design, . . . 1 00
Mrs. E. M. Gill, " " . . . 1 00
C. M. Atkinson, for Rhododendron (Iago), . . 2 00
John B. Moore, for fine Gloxinias, ... 2 00

JUNE 13.

IRIS (Tuberous varieties).—For the best twelve named varieties, to James McTear, ... 4 00

RHODODENDRONS.—For the best twelve named varieties, one truss of each in boxes on a neatly arranged carpet of moss, or in vases or dishes of the Society, to E. S. Rand, Jr., ... 10 00

Hunnewell Premiums.—Open to all.

HARDY RHODODENDRONS:—For the best display of named varieties, to E. S. Rand, Jr., ... 35 00
For the second best, to Joseph Clark, . . . 25 00

HARDY AZALEAS.—For the best display of named varieties, to E. S. Rand, Jr., ... 20 00
For the second best, to Joseph Clark, . . . 10 00

Gratuities:—

To H. H. Hunnewell, for a splendid display of Rhododendrons and Azaleas, ... 10 00
George Everett, for Iris, ... 2 00
" " " *Iris susiana*, ... 1 00
J. Warren Merrill, for rare English Ferns, . . 5 00
J. McTear, for Bouquets, ... 1 00

To James Comley, for choice Cut Flowers,	$2 00
Joseph Clark, " " " "	2 00
James McTear, " " " "	2 00
James Comley, " " " "	3 00
Francis Parkman, for Herbaceous Flowers,	2 00
Mrs. S. Joyce, for Basket of Flowers,	2 00
James Cartwright, for Fuchsia Sun Ray,	2 00
Francis Parkman, for Hardy Azaleas,	2 00
Miss Anna C. Kenrick, for Flowering Shrubs,	1 00
J. H. Woodford, for Clematis,	1 00

JUNE 20.

Gratuities:—

To C. H. Lunt, for Lilies,	1 00
James McTear, for Cut Flowers and Bouquets,	2 00

ROSE EXHIBITION.

JUNE 24 and 25.

HARDY PERPETUAL ROSES. — For the best twenty-four distinct named varieties, to William Gray, Jr.,	$10 00
For the second best, to J. C. Chaffin,	8 00
For the third best, to Francis Parkman,	6 00
For the best twelve distinct named varieties, to James McTear,	6 00
For the second best, to Joseph Clark,	5 00
For the third best, to A. McLaren,	4 00
MOSS ROSES.—For the best twelve named varieties, to James McTear,	5 00
For the second best, to A. McLaren,	4 00
For the third best, to Francis Parkman,	3 00
TENDER ROSES.—For the best twelve named varieties, to E. S. Rand, Jr.,	5 00
For the second best, to James Comley,	4 00
For the third best, to James McTear,	3 00
ROSES.—For the best general display, to Joseph Clark,	10 00

Special Prizes for Hybrid Perpetual Roses, offered by Hunnewell, Esq. Open to all.	H.	H.
For the best six named varieties, to William Gray, Jr.	$20	00
For the second best, to J. C. Chaffin, . . .	10	00
For the best twelve, of any one variety, to J. C. Chaffin, .	20	00
For the second best, to J. C. Chaffin, . . .	10	00

Plants in Pots.

Greenhouse Plants.—For the best twelve greenhouse or stove plants of different varieties, to William Gray, Jr.	30	00
For the best six greenhouse, or stove flowering plants, of different varieties, to E. S. Rand, Jr., . .	30	00
Specimen Plant.—Regard being had to new and rare varieties.		
For the best specimen plant, of a kind for which no special prize is offered, to E. S. Rand, Jr., .	6	00
For the second best, to James Comley, . . .	4	00
Fuchsias.—For the best six named varieties, in pots, to E. Butler, ...	10	00
Gloxinias.—For the best eight named varieties, in pots, to Joseph Clark, ...	8	00
For the second best, to John B. Moore, . . .	6	00
For the best six named Variegated Zonale varieties, to William Gray, Jr., ...	6	00
For the second best, to James Comley, . . .	5	00
Native Plants.—For the best display of named species and varieties, one bottle of each, to Mrs. C. N. S. Horner, ...	5	00
Wardian Case.—For the best specimen, to W. H. Halliday, ...	15	00
Fern Case.—For the best, not to exceed fifteen inches in diameter, to W. H. Halliday, ...	5	00
For the second best, to J. Warren Merrill, . .	4	00
For the third best, to James McTear, . . .	3	00

Cut Flowers.

HERBACEOUS PÆONIES.—For the best ten named varieties, to Francis Parkman, ... $5 00
For the second best, to James McTear, . . . 4 00
PAISLEY PINKS.—For the best sixty blooms, not less than six named varieties, exhibited in bunches of three of the same variety, to Joseph Clark, . . . 5 00
SUMMER HERBACEOUS PLANTS.—For the best display of named species and varieties, one bottle of each variety, to James McTear, ... 5 00
For the second best, to Francis Parkman, . . 4 00
CUT FLOWERS.—For the best display, and best kept during the exhibition, to James O'Brien, . . . 8 00
For the second best, to James Comley, . . . 7 00
For the third best, to James Nugent, . . . 6 00
BASKETS OF FLOWERS.—For the best arranged, and best kept during the exhibition, to Mrs. A. D. Wood, 5 00
For the second best, to Mrs. S. Joyce, . . . 4 00
For the third best, to Mrs. E. M. Gill, . . . 3 00
HANGING WIRE BASKETS OF FLOWERS.—For the best arranged, to Mrs. S. Joyce, ... 4 00
For the second best, to Mrs. E. M. Gill, . . 3 00
BOUQUETS.—For the best pair of Parlor Bouquets, to James McTear, ... 4 00
For the best pair of Hand Bouquets, to James O'Brien, ... 4 00
For the second best, to James McTear, . . . 3 00

Gratuities:—

To J. Warren Merrill, for collection of Ferns, . . 5 00
James Comley, for choice collection of Plants, . . 20 00
J. H. Woodford, for Roses, ... 2 00
James McTear, for Pot Plants, ... 5 00
J. B. Moore, for Gloxinias, ... 2 00
" " . " *Trichinium Manglesii*, . . . 2 00
E. S. Rand, Jr., for Rhododendrons and Kalmias, . 4 00
Mrs. C. B. Chase, for Design, ... 2 00
Joseph Clark, for Cut Flowers, ... 1 00
J. A. Black, " " " 3 00
M. W. Clark, for *Myosotis palustris*, . . . 1 00

To G. A. Law, for Pansies, ... $1 00
J. B. Moore, for Cut Flowers, ... 2 00
" " " *Amaryllis vittata* sp., . . . 1 00
J. H. Woodford, for Roses, ... 3 00
Joseph Clark, for Rhododendrons and Kalmias, . 3 00
" " for Vases of choice Flowers, . . 3 00
David Winslow, for Yellow Rose, ... 1 00
Marshall P. Wilder, for Pæonies, ... 2 00

JUNE 27.

Gratuities:—

To Francis Parkman, for choice Hybrid Perpetual Roses, 3 00
G. W. Mellen, for Pæonies, ... 1 00

JULY 2.

SUMMER PHLOXES.—For the best ten distinct named varieties, to James McTear, ... 4 00
CUT FLOWERS.—For the best display, filling 150 bottles, to James O'Brien, ... 5 00
For the second best, to James Nugent, . . . 4 00
BASKETS OF FLOWERS.—For the best arranged, to Mrs. A. D. Wood, ... 3 00
For the second best, to Mrs. S. Joyce, . . . 2 00
BOUQUETS.—For the best pair of Parlor Bouquets, to James O'Brien, ... 3 00

Gratuities:—

To James Comley, for choice Cut Flowers, . . . 3 00
" " " Vase of Pinks, ... 1 00
Miss Sarah W. Story, for Dish of Flowers, . . 3 00
Miss A. C. Wheeler, " " " . . 1 00
Mrs. E. M. Gill, for Basket of Flowers, . . . 1 00
Mrs. S. Joyce, for Cut Flowers, ... 2 00
Mrs. A. D. Wood, for Vase of Flowers, . . . 1 00
Marshall P. Wilder, for Seedling Gloxinia, . . 1 00
Joseph Clark, for choice Exotic Flowers, . . . 4 00
James Comley, for Pot Plants, ... 3 00
Mrs. C. N. S. Horner, for Native Flowers, . . 2 00

JULY 11.

SUMMER LILIES.—For the best, to Herbert Gleason, .	$5 00
For the second best, to J. S. Richards, . . .	4 00
CUT FLOWERS.—For the best display, filling 150 bottles, to James O'Brien, ...	5 00
For the second best, to A. McLaren, . . .	4 00
For the third best, to C. H. B. Breck, . . .	3 00
BASKETS OF FLOWERS.—For the best arranged, to Mrs. A. D. Wood, ...	3 00
For the second best, to Mrs. E. M. Gill, . .	2 00

Gratuities:—

To George Everett, for Liliums and Clematis, . . .	2 00
Joseph Clark, for fine specimen Gloxinia, . .	2 00
James Comley, for Plants and Flowers, . . .	5 00
Miss A. C. Kenrick, for *Magnolia macrophylla*, .	1 00
E. H. Hitchings, for Native Plants, ...	2 00
Mrs. C. N. S. Horner, for Native Flowers, . .	2 00
Hovey & Co., for Native Rhododendrons, . .	2 00
G. A. Law, for English Iris, ...	2 00
Joseph Clark, for choice Exotic Flowers, . . .	4 00
Mrs. S. Joyce, for Dish of Flowers and Vase of Lilies,	3 00
Miss S. W. Story, for Vase and Dishes of Flowers, .	3 00
Miss A. C. Wheeler, for Lilies, ...	2 00
Mrs. E. M. Gill, for Cut Flowers, ...	1 00
B. D. Hill, " " "	1 00
W. K. Wood, " " "	1 00

JULY 18.

STOCKS.—For the best display, not less than six varieties, 25 bottles, three spikes in each bottle, to Mrs. E. M. Gill, ...	4 00
CUT FLOWERS.—For the best display, filling 150 bottles, to James O'Brien, ...	5 00
For the second best, to A. McLaren, . . .	4 00
BASKETS OF FLOWERS.—For the best arranged, to Mrs. S. Joyce, ...	3 00
For the second best, to Mrs. A. D. Wood, . .	2 00

NATIVE PLANTS.—For the best display of named species and varieties, one bottle of each, to Mrs. C. N. S. Horner, ... $5 00
For the second best, to E. H. Hitchings, . . 4 00

Gratuities:—

To Mrs. Southmayd, for *Zephyranthes rosea*, . . . 1 00
George Everett, for Lilies and Clematis, . . . 3 00
James Nugent, for Yucca and *Lilium auratum*, . 2 00
Joseph Tailby, for *Lilium auratum*, ... 1 00
George Swain, for " " 1 00
Warren Heustis, for " " 1 00
Francis Parkman, for Seedling Delphinium (very fine), 3 00
—— Edgar, for Seedling Gloxinia, ... 1 00
E. S. Rand, Jr., for rare Orchid, ... 2 00
W. K. Wood, for Lilies, ... 1 00
J. S. Richards, for Vase of Flowers, . . . 1 00
Miss A. C. Wheeler, for Table Design, . . . 1 00
Mrs. C. B. Chase, " " " . . . 2 00
Miss S. W. Story, " " " . . . 2 00
Joseph Clark, " " " . . . 4 00
Mrs. E. M. Gill, for Dish of Flowers, . . . 2 00
Mrs. S. Joyce, " " " " . . . 1 00
James Comley, for stand of choice Flowers, . . 3 00
" " " new Bulbous Begonias, . . 4 00
John C. Hovey, for Herbaceous Flowers, . . . 1 00
Mrs. C. N. S. Horner, for *Nymphæa odorata*, . . 1 00
C. M. Atkinson, for Carnation Lady Bird, . . 1 00

JULY 25.

ORCHIDS.—For the best three varieties in bloom, to E. S. Rand, Jr., ... 8 00
CUT FLOWERS.—For the best display, filling 150 bottles, to James O'Brien, ... 5 00
For the second best, to A. McLaren, . . . 4 00
For the third best, to C. H. B. Breck, . . . 3 00
BASKETS OF FLOWERS.—For the best arranged, to Mrs. S. Joyce, ... 3 00
For the second best, to Mrs. E. M. Gill, . . . 2 00

BOUQUETS.—For the best pair of Parlor Bouquets, to James Nugent, ... $3 00
For the best pair of Hand Bouquets, to James Nugent, 3 00
For the second best, to James O'Brien, . . . 2 00

Gratuities:—

To Joseph Tailby, for *Lilium auratum*, ... 2 00
James Nugent, for " " 3 00
W. H. Spooner, for *Lilium longiflorum*, . . . 2 00
Joseph Clark, for choice Greenhouse Flowers, . . 4 00
James Comley, for Plants and Flowers, . . . 5 00
Miss A. C. Wheeler, for Cut Flowers, . . . 1 00
Hovey & Co., " " " . . . 1 00
Mrs. C. B. Chase, for Table Design, . . . 1 00
Mrs. A. D. Wood, " " " 3 00
John Robinson, for Tamarix, ... 1 00
Miss S. W. Story, for Basket of Flowers, . . 2 00
Miss M. E. Carter, for Native Grasses and Sedges, . 4 00
E. H. Hitchings, for Native Flowers, . . . 1 00
George A. Davenport, for Native Ferns and Flowers, 2 00
Mrs. C. N. S. Horner, for Native Plants, . . . 3 00
Miss M. E. Carter, for Native Plants, . . . 2 00
C. M. Atkinson, for Achimenes, ... 5 00
Joseph Clark, for Hollyhocks, ... 4 00
George Everett, for Liliums and Clematis, . . 2 00
Mrs. S. Joyce, for Balsams, ... 1 00

AUGUST 1.

LATE PHLOXES.—For the best ten distinct named varieties to A. McLaren, ... 4 00
CUT FLOWERS.—For the best display, filling 150 bottles, to James O'Brien, - 5 00
For the second best, to A. McLaren, . . . 4 00
For the third best, to C. H. B. Breck, . . . 3 00
For the best collection of fifty named varieties, to James Comley, ... 6 00
For the second best, to James O'Brien, . . 4 00
BASKETS OF FLOWERS.—For the best arranged, to Mrs. S. Joyce, ... 3 00
For the second best, to Mrs. A. D. Wood, . . 2 00

Fungi.—For the best collection, to Mrs. C. N. S. Horner,	$4 00
For the second best, to Mrs. E. M. Gill, . .	3 00
Gratuities:—	
To Joseph Clark, for choice Greenhouse Flowers, . .	4 00
Joseph Tailby, for *Lilium auratum*, ...	3 00
Warren Heustis, for " "	3 00
James O'Brien, for *Lilium lancifolium*, . . .	1 00
Miss A. C. Wheeler, for Hollyhocks, . . .	1 00
Miss S. W. Story, for Basket of Flowers, . .	2 00
Mrs. E. M. Gill, for Cut Flowers, ...	2 00
Mrs. S. Joyce, " " "	2 00
Mrs. C. B. Chase, " " "	1 00
George Everett, " " "	2 00
George E. Davenport, for collection of Lycopods, .	3 00
George A. Law, for Hollyhocks and Balsams, . .	1 00
Mrs. C. N. S. Horner, for collection of Native Flowers,	3 00
J. S. Richards, for Gladioli, ...	3 00
Mrs. E. M. Gill, for Stocks, ...	1 00
J. B. Moore, for collection of Petunias, . . .	2 00
James Nugent, for Gladioli and Bouquets, . .	3 00
A. P. Calder, for display of Gloxinias, . . .	6 00
James Comley, for new Ferns, ...	2 00
Joseph Clark, for Achimenes, ...	2 00

August 8.

Balsams.—For the best twelve spikes, eight varieties, to George A. Law, ...	4 00
For the second best, to J. B. Moore, . . .	3 00
Bouquets.—For the best pair of Hand Bouquets, to James O'Brien, ...	3 00
For the second best, to James Nugent, . . .	2 00
Cut Flowers.—For the best display, filling 150 bottles, to James O'Brien, ...	5 00
For the best collection of fifty named varieties, to James O'Brien, ...	6 00
For the second best, to George A. Law, . .	4 00
Baskets of Flowers.—For the best arranged, to Mrs. S. Joyce, ...	3 00
For the second best, to Mrs. A. D. Wood, . .	2 00

Gratuities:—

To Joseph Tailby, for *Lilium auratum*,	$3 00
James O'Brien, for *Lilium lancifolium*,	1 00
Francis Parkman, for *Lilium superbum*,	1 00
Joseph Clark, for Table Design,	3 00
Mrs. C. N. S. Horner, for Native Plants,	3 00
George E. Davenport, " " "	2 00
William Edwards, for Native Lobelias,	1 00
Mrs. E. M. Gill, for Cut Flowers,	2 00
James Nugent, " " "	1 00
James Comley, for choice Flowers and Plants,	6 00
Joseph Clark, for Hanging Basket of Flowers,	2 00
Mrs. S. Joyce, for Dish of Flowers,	1 00
J. S. Richards, for Gladioli,	3 00

AUGUST 15.

LILIES.—For the best display of *Lilium lancifolium*, to James Comley,	5 00
For the second best, to W. H. Spooner,	4 00

CLASS I.

CUT FLOWERS.—For the best display, filling 150 bottles, to James O'Brien,	5 00
For the third best, to C. H. B. Breck,	3 00

CLASS II.

For the best collection of fifty named varieties, to James Comley,	6 00
For the second best, to James O'Brien,	4 00
BASKETS OF FLOWERS.—For the best arranged, to Mrs. S. Joyce,	3 00
For the second best, to Mrs. A. D. Wood,	2 00
NATIVE FERNS.—For the best display of named species, one bottle of each, to Mrs. C. N. S. Horner,	5 00

Gratuities:—

To Mrs. C. N. S. Horner, for Native Plants,	1 00
George E. Davenport, for Native Ferns,	1 00
George N. Noyes, for Balsams,	1 00
Parker Barnes, for *Amaranthus variegatus*,	1 00

To Mrs. E. M. Gill, for Cut Flowers, ... $2 00
" " " for Table Design, ... 2 00
Joseph Clark, " " " 4 00
Joseph Tailby, for *Lilium auratum*, . . . 3 00
George Craft, for Gladioli, ... 3 00
J. S. Richards, for Gladioli, ... 1 00
Marshall P. Wilder, for Double Tiger Lilies, . . 1 00
Miss A. C. Wheeler, for Dish of Flowers, . . 1 00
Mrs. S. Joyce, " " " . . . 1 00
" " " " " Balsams, . . 1 00
Mrs. E. M. Gill, " " " . . 1 00
Miss S. W. Story, for Basket of Flowers, . . 2 00
Francis Parkman, for *Liatris*, ... 1 00
C. W. W. Wellington, for *Liatris*, ... 1 00

August 22.

Gladioli.—For the best twenty named varieties, in spikes, to James Comley, ... 8 00
For the second best, to George Everett, . . 6 00
For the third best, to George Craft, . . . 5 00
For the best ten named varieties, in spikes, to J. S. Richards, ... 5 00
For the third best, to James McTear, . . . 3 00
For the best display of named or unnamed varieties, to J. S. Richards, ... 6 00
For the second best, to George Craft, . . . 5 00
For the third best, to Herbert Gleason, . . 4 00
For the best single specimen spike, to James Comley, 2 00
For the second best, to J. S. Richards, . . . 1 00
For the best Seedling, the Society's Silver Medal, to James Comley.
Bouquets.—For the best pair of Parlor Bouquets, to James Nugent, ... 3 00
For the second best, to James O'Brien, . . . 2 00
For the best pair of Hand Bouquets, to James Nugent, 3 00
For the second best, to James O'Brien, . . . 2 00
Cut Flowers.—For the best display, filling 150 bottles, to James O'Brien, ... 5 00
For the third best, to A. McLaren, . . . 3 00

For the best collection of fifty named varieties, to James Comley, ... $6 00
For the second best, to James O'Brien, . . . 4 00
Baskets of Flowers.—For the best arranged, to Mrs. A. D. Wood, ... 3 00
For the second best, to Mrs. S. Joyce, . . . 2 00

Gratuities:—

To James Comley, for stand of choice Flowers, . . 2 00
Joseph Clark, for choice Exotic Flowers, . . 4 00
Joseph Tailby, for *Lilium auratum*, ... 2 00
W. H. Spooner, for *Lilium lancifolium*, . . . 2 00
Russell Sturgis, Jr., for Asters, ... 1 00
George E. Davenport, for Native Plants, . . . 2 00
George E. Osgood, for Bouquet of Native Flowers, . 1 00
W. K. Wood, for Petunias, ... 1 00
Miss S. W. Story, for Dish of Flowers, . . . 2 00
Mrs. E. M. Gill, " " " " . . . 2 00
Mrs. E. M. Gill, for stand of Cut Flowers, . . 1 00
James Nugent, " " " " . . 2 00
George Everett, for new Phlox, ... 1 00

August 29.

Asters.—For the best thirty flowers, not less than ten varieties, to C. M. Atkinson, ... 5 00
For the second best, to J. A. Black, . . . 4 00
For the third best, to John Parker, ... 3 00
For the best twenty flowers, not less than six varieties, to James O'Brien, ... 3 00
For the second best, to John Robinson, . . . 2 00
Pompons.—For the best sixty blooms, not less than six varieties, in bunches of three of the same variety, to James O'Brien, ... 4 00
For the second best, to John Robinson, . . . 3 00
For the third best, to James Nugent, . . . 2 00
Verbenas.—For the best collection, filling 50 bottles, to James O'Brien, ... 4 00
For the second best, to J. B. Moore, . . . 3 00

Cut Flowers.—For the best display, filling 150 bottles, to James O'Brien,	$5 00
For the second best, to George Craft,	4 00
For the third best, to C. H. B. Breck,	3 00
For the best collection of fifty named varieties, to James Comley,	6 00
For the second best, to James McTear,	4 00
Baskets of Flowers.—For the best arranged, to Mrs. A. D. Wood,	3 00
For the second best, to Mrs. S. Joyce,	2 00
Gratuities:—	
To Joseph Clark, for fine Table Design,	3 00
Miss A. C. Wheeler, for Table Design,	1 00
Joseph Tailby, for *Lilium auratum*,	1 00
Waldo O. Ross, for *Rochea falcata*,	1 00
Benjamin G. Smith, for *Vallota purpurea*,	2 00
James Comley, for Vases of Flowers,	1 00
George Everett, for Gladioli,	2 00
Herbert Gleason, for Gladioli,	2 00
W. H. Spooner, for choice Gladioli,	2 00
Mrs. C. N. S. Horner, for Native Plants,	2 00
Mrs. M. E. Carter, " " "	2 00
Miss S. W. Story, for Dish of Flowers,	2 00
Mrs. A. D. Wood, " " "	2 00
Mrs. E. M. Gill, for Cut Flowers,	2 00
Mrs. S. Joyce, " " "	1 00
James Comley, " " "	2 00
C. H. B. Breck, for Washington Asters,	1 00
J. A. Black, for Asters,	1 00

September 5.

Double Zinnias.—For the best thirty flowers, not less than six varieties, to G. A. Law,	2 00
For the second best, to Joseph Clark,	3 00
For the second best twenty flowers, not less than four varieties, to James Nugent,	2 00
Cut Flowers.—For the best display, filling 150 bottles, to A. McLaren,	5 00
For the second best, to C. H. B. Breck,	4 00

For the best collection of fifty named varieties, to C. M. Atkinson,	$6 00
For the second best, to James O'Brien,	4 00
Baskets of Flowers.—For the best arranged, to Mrs. A. D. Wood,	3 00
For the second best, to Mrs. S. Joyce,	2 00
Native Plants.—For the best display of named species and varieties, one bottle of each, to Mrs. C. N. S. Horner,	5 00

Gratuities:—

To Joseph Clark, for Table Design,	3 00
Mrs. C. B. Chase, for Design,	2 00
James Nugent, for Bouquets and Cut Flowers,	3 00
John Robinson, for splendid Asters,	2 00
James O'Brien, for Asters,	1 00
A. P. Calder, for *Hydrangea paniculata*,	1 00
M. W. Clark, for *Myosotis* (Forget-me-not),	1 00
Francis Parker, for Phlox,	1 00
George Craft, for fine Seedling Gladioli,	5 00
W. H. Spooner, for splendid named Gladioli,	3 00
Macey Randall, for Dahlias,	2 00
George Everett, for Dahlias and Gladioli,	2 00
J. B. Moore, for Petunias and Balsams,	3 00
Miss A. C. Wheeler, for Cut Flowers,	1 00
Samuel Hartwell, " " "	2 00
James O'Brien, " " "	3 00
P. Smith, " " "	1 00
Mrs. Joyce, " " "	1 00
Miss S. W. Story, for Dish of choice Flowers,	2 00
Mrs. E. M. Gill, " " " "	2 00
James O'Brien, for Verbenas,	1 00
Henry Youell, " "	1 00
A. Hatch, for Verbenas and Asters,	1 00
Joseph Clark, for Roses,	2 00

ANNUAL EXHIBITION.

September 15, 16, 17 and 18.

Greenhouse Plants.—For the best twelve greenhouse and stove plants, of different varieties, to William Gray Jr., ... $40 00

For the second best, to Hovey & Co., . . . 35 00

Specimen Plant.—For the best, not variegated, of a kind for which no special prize is offered, to William Gray, Jr., ... 10 00

For the second best, to Hovey & Co., . . . 6 00

Specimen Flowering Plant.—For the best, to Joseph Clark, ... 10 00

For the second best, to Hovey & Co., . . . 6 00

Variegated Leaved Plants.—For the best six varieties, not offered in the collection of greenhouse plants, to James Comley, ... 10 00

For second best, to Hovey & Co., ... 8 00

For third best, to William Gray, Jr., . . . 6 00

Variegated Plants.—For the best single specimen, not offered in any collection, to F. L. Ames, . . 5 00

For the second best, to William Gray, Jr., . . 4 00

Caladiums.—For the best six varieties, to F. L. Ames, . 6 00

For the second best, to Hovey & Co., . . . 5 00

Ferns.—For the best twelve named varieties, to William Edgar, ... 15 00

For the second best, to J. Warren Merrill, . . 10 00

For the best six named varieties, to Joseph Clark, . 10 00

For the second best, to J. Warren Merrill, . . 6 00

Tree Ferns.—For the best pair, to Hovey & Co., . . 15 00

For the best single specimen, not offered in any collection, to M. Walsh, ... 6 00

Lycopods.—For the best six named varieties, to William Edgar, ... 5 00

For the second best, to M. Walsh, ... 3 00

Dracænas.—For the best six named varieties, to Hovey & Co., ... 10 00

Palms.—For the best six named varieties, to Hovey & Co. 10 00

For the second best, to William Gray, Jr., . . 6 00

AGAVES.—For the best twelve distinct species, to Hovey & Co., ... $15 00
For the second best, to Charles S. Sargent, . . 10 00
CACTI.—For the best twenty-five species and varieties, to L. Guerineau, ... 10 00
For the second best, to Hovey & Co., . . . 8 00
SUCCULENTS.—For the best collection (other than Agaves and Cacti) of twenty-five species and varieties, to L. Guerineau, ... 10 00
For the second best. to Hovey & Co., . . . 8 00
BEST NEW POT PLANT.—It having never before been exhibited at any exhibition of the Society, to Charles S. Sargent, the Society's Silver Medal,
HANGING BASKETS.—The plants to have been growing in them at least one month.
For the best specimen, to Hovey & Co., . . . 5 00
GLADIOLUS.—For the best display and best kept during the exhibition, of named or unnamed varieties, filling 150 bottles, to George Craft, . . . 10 00
For the second best, to A. McLaren, . . . 8 00
For the third best, to W. H. Spooner, . . . 6 00
DAHLIAS.—Prizes to be awarded the second day of the exhibition.
For the best twenty-four named varieties, to Macey Randall, ... 6 00
For the second best, to George Everett, . . . 5 00
For the best twelve named varieties, to James Comley, 4 00
For the second best, to George Everett, . . . 3 00
For the best general display of large flowers only, filling 100 bottles, to George Everett, . . . 8 00
For the second best, to Macey Randall, . . . 6 00
LILIPUTIAN.—For the best general display, filling 50 bottles, to George Everett, ... 4 00
For the second best, to Macey Randall, . . . 3 00
PARLOR BOUQUETS.—For the best pair, to be exhibited on Wednesday, to Hovey & Co., ... 6 00
For the second best, to James Nugent, . . . 4 00
HAND BOUQUETS.—For the best pair on Wednesday, to Mrs. S. Joyce, ... 6 00
For the second best, to James Nugent, . . . 4 00

PARLOR BOUQUETS.—For the best pair, to be exhibited on Thursday, to James Nugent, ... $6 00
For the second best, to James O'Brien, . . . 4 00
HAND BOUQUETS.—For the best pair on Thursday, to James Nugent, ... 6 00
For the second best, to James O'Brien, . . . 4 00
LARGE BOUQUETS.—For the best pair, suitable for the Bradlee or Jones Vases, and best kept during the exhibition, to James Nugent, ... 10 00
CUT FLOWERS.—For the best display and best kept during the exhibition, to James Comley, . . . 18 00
For the second best, to James O'Brien . . . 16 00
For the third best, to A. McLaren, ... 14 00
For the fourth best, to J. E. Westgate, . . . 12 00
For the fifth best, to Hovey & Co., ... 10 00
For the sixth best, to George A. Law, . . . 8 00
For the seventh best, to C. H. B. Breck, . . . 6 00
BASKETS OF FLOWERS.—For the best arranged and best kept during the exhibition, the Society's Silver Medal, to Mrs. A. D. Wood.
For the second best, to Mrs. S. Joyce, . . . 5 00
For the third best, to Mrs. E. M. Gill, . . . 4 00
RUSTIC STAND.—For the best specimen, not less than three feet in height, to be planted with choice Plants, to C. H. B. Breck, ... 10 00
For the second best, to Hovey & Co., . . . 8 00
TABLE DESIGN.—For the best, to be arranged without fruit, and not to exceed four feet in height, to Mrs. A. D. Wood, ... 10 00
For the second best, to Joseph Clark, . . . 8 00

Hunnewell Premiums. Open to all.

EVERGREEN TREES AND SHRUBS.—For the best display in pots, to Hovey & Co., ... 8 00

Gratuities :—

To James Comley, for Asters in pots, choice varieties, . 3 00
J. O'Brien, " Asters, ... 3 00

To Hovey & Co.,	for collection of Pot Plants,	$10 00
James Comley,	" " new and choice Plants,	20 00
C. H. B. Breck,	" " Plants,	8 00
F. L. Ames,	" " "	5 00
Michael Walsh,	" " "	15 00
Louis Menand,	" " "	25 00
E. F. Washburn,	" "	2 00
J. L. Bird,	" Pot Plants,	3 00
Hovey & Co.,	" "	6 00
Mrs. C. N. S. Horner,	for Native Plants,	5 00
E. H. Titus,	for Bouquet of Native Flowers,	1 00
" "	" Rustic Stand of Native Ferns,	3 00
Joseph Clark,	for Hybrid Perpetual Roses,	3 00
Richard Allison,	for Flower Garden Design,	5 00
James Leister,	" "	3 00
Henry Youell,	" "	2 00
James McTear,	for *Desmodium pendulæflorum*,	2 00
John Cadness,	" *Hydrangea paniculata*,	3 00
Mrs. A. Freeman,	for *Lapageria rosea*,	1 00
William Edgar,	" *Todea pellucida*,	3 00
J. B. Moore,	" *Lapageria alba*,	2 00
Hovey & Co.,	" *Acrostichum alcicorne*,	1 00
James Comley,	" *Sempervivum Californicum*,	2 00
Samuel G. Stone,	" Dahlias,	3 00
Hovey & Co.,	" Dahlias,	4 00
Joseph Clark,	" rare Ferns,	2 00
J. Warren Merrill,	" rare Ferns,	5 00
H. H. Hunnewell,	" rare Evergreens,	25 00
Caleb Bates,	" Cockscombs,	1 00
J. O'Brien,	" Cockscombs,	1 00
G. A. Law,	" Zinnias and Asters,	3 00
George Everett,	" Clematis,	1 00
" "	" Gladioli,	2 00
J. B. Moore,	" Bouquets,	2 00
James O'Brien,	" Bouquets,	1 00
" "	" Bouquets,	2 00
Mrs. E. M. Gill,	" Bouquets,	2 00
Mrs. S. Joyce,	" Table Design,	2 00
M. W. Pray,	for Design,	3 00
Joseph Tailby,	for Rose Buds,	1 00

To Miss Sarah W. Story, for Dish of Flowers, . . $2 00
Mrs. A. D. Wood, for Dish of Flowers, . . . 2 00
James O'Brien, " Cut Flowers, ... 2 00
James Comley, " " " 1 00
John Parker, " " " 5 00

October 10.

Gratuities:—

To Mrs. C. N. S. Horner, for Native Ferns, . . . 2 00
George E. Davenport, " Fern Case, . . . 2 00
E. S. Rand, Jr., for *Vanda Bensoni*, . . . 2 00
James McTear, " *Nerine corusca*, ... 1 00
George N. Noyes, " *Vallota purpurea*, . . . 1 00
Mrs. S. Joyce, " Dish of Flowers, . . . 2 00
S. G. Stone, " Dahlias, ... 1 00
James Comley, " Dahlias, ... 1 00
" " " Table Bouquet, ... 1 00
Mrs. E. M. Gill, " Bouquet, ... 1 00
Mrs. A. D. Wood, for Basket, ... 2 00

October 17.

Baskets of Flowers.—For the best arranged, to Mrs. A. D. Wood, ... 3 00
For the second best, to Mrs. S. Joyce, . . . 2 00
Parlor Bouquets.—For the best pair, to James Comley, 4 00
Hand Bouquets.—For the best pair, to James O'Brien, 3 00

Gratuities:—

To E. S. Rand, Jr., for fine Orchids, ... 3 00
Hovey & Co., " " 2 00
Miss A. C. Wheeler, for Dish of Flowers, . . . 1 00

October 31.

Gratuities:—

To E. S. Rand, Jr., for splendid Orchids, . . . 3 00
James Comley, " Bouquet and Cut Flowers, . . 2 00
Mrs. S. Joyce, " Basket of Flowers, . . . 1 00

CHRYSANTHEMUM SHOW.

November 7.

For the best six distinct named Pompons, in pots, to C. M. Atkinson,	$10 00
For the best twelve named Large Flowered varieties, Cut Specimens, to James McTear,	3 00
For the best twelve named Pompon varieties, Cut Specimens, to James McTear,	3 00
For the second best, to James Nugent,	2 00
For the best general display, named or unnamed varieties, Cut Specimens filling 50 bottles, to James McTear,	5 00
For the second best, to C. M. Atkinson,	4 00
For the third best, to James Nugent,	3 00
Baskets of Flowers.—For the best arranged, to Mrs. A. D. Wood,	3 00
For the second best, to Mrs. S. Joyce,	2 00
Hand Bouquets —For the best pair, to James Nugent,	3 00
For the second best, to Mrs. S. Joyce,	2 00

Gratuities:—

To Miss S. W. Story, for Basket of Flowers,	2 00
James Comley, " " "	4 00
Mrs. E. M. Gill, for *Lasiandra floribunda*,	1 00
James Comley, for *Lapageria alba*,	2 00
James McTear, for *Nerine corusca*,	1 00
" " " Table Bouquet,	2 00
E. S. Rand, Jr., for choice Orchids,	3 00
S. G. Stone, for Dahlias,	1 00
Miss A. C. Wheeler, for Cut Flowers,	1 00
Mrs. E. M. Gill, " " "	1 00
Miss A. C. Wheeler, for Design,	1 00
E. W. Wood, for Chrysanthemums,	8 00

November 14.

Gratuities:—

To James Comley, for choice Cut Flowers,	2 00
Mrs. E. M. Gill, for Basket of Flowers,	2 00
Mrs. S. Joyce, " " "	2 00

The following Medals and Certificates of Merit have been awarded:

To E. S. Rand, Jr., for *Phalænopsis amabilis*, Silver Medal.
" " " " for *Calanthe Veitchii*, Bronze Medal.
James O'Brien, for Cyclamens, Silver Medal.
C. M. Atkinson, for *Imatophyllum miniatum*, Silver Medal.
E. S. Rand, Jr., for *Angræcum sesquipedale*, Silver Medal.
Joseph Tailby, for Rose, Eliza Tailby, First Class Certificate of Merit.
James Comley, for *Aralia Veitchii*, First Class Certificate of Merit.
James Comley, for *Rhododendron Veitchianum lævigatum*, Bronze Medal.
E. S. Rand, Jr., for *Vanda cærulea*, Bronze Medal.
Francis Putnam, for Seedling Amaryllis, First Class Certificate of Merit.
William Gray, Jr., for fine Tricolor Geraniums, Silver Medal.
" " " " *Retinispora filiformis pendula fol. var.*, Silver Medal.
Francis Parkman, for *Lilium*, a fine Hybrid between *L. auratum* and *L. lancifolium*, First Class Certificate of Merit.
James Comley, for *Lapageria alba*, First Class Certificate of Merit.
E. S. Rand, Jr., for *Tapeinotes Carolinæ*, First Class Certificate of Merit.
Louis Guerineau, for *Peristeria elata*, Silver Medal.
Louis Menand, for *Phalænopsis grandiflora aurea*, Bronze Medal.
Louis Menand, for fine collection of Agaves, Silver Medal.
Charles S. Sargent, for *Agave schidigera*, Silver Medal.

The amount awarded to each contributor is as follows: —

Richard Allison . .	$5	J. A. Black . .	$8
F. L. Ames . .	11	C. H. B. Breck . .	44
C. M. Atkinson . .	53	Edward Butler . .	10
Parker Barnes . .	1	John Cadness . .	3
Caleb Bates . .	1	A. P. Calder . .	7
John L. Bird . .	3	Miss M. E. Carter .	9

James Cartwright	$6	A. McLaren	$58
John C. Chaffin	48	James McTear	113
Mrs. C. B. Chase	6	G. W. Mellen	1
Joseph Clark	168	Louis Menand	25
M. W. Clark	2	J. Warren Merrill	35
James Comley	279	J. B. Moore	56
George Craft	32	George N. Noyes	3
George E. Davenport	18	James Nugent	83
Willis E. Davenport	1	James O'Brien	169
Jackson Dawson	5	George E. Osgood	2
William Edgar	24	John Parker	9
William Edwards	1	Francis Parkman	32
George Everett	46	Mrs. M. W. Pray	3
A. W. Felton	1	Francis Putnam	3
Edwin Fewkes	2	Edward S. Rand, Jr.	191
Mrs. A. Freeman	1	Macey Randall	17
C. B. Gardiner	5	J. S. Richards	28
Mrs. E. M. Gill	82	John Robinson	8
Herbert Gleason	13	Waldo O. Ross	1
James Gray	11	C. S. Sargent	10
William Gray, Jr.	142	B. G. Smith	3
Louis Guerineau	20	Mrs. Southmayd	1
W. H. Halliday	30	W. H. Spooner	16
Samuel Hartwell	2	S. G. Stone	5
A. Hatch	1	Russell Sturgis, Jr.	1
Warren Heustis	4	E. L. Sturtevant	1
B. D. Hill	4	George Swain	1
E. H. Hitchings	8	Joseph Tailby	22
Mrs. C. N. S. Horner	58	Thomas Tapper	1
Hovey & Co.	251	E. H. Titus	4
John C. Hovey	1	Michael Walsh	24
H. H. Hunnewell	25	E. F. Washburn	2
Mrs. C. Jaquitte	1	C. W. Wellington	1
C. W. Jenks	1	J. E. Westgate	12
Mrs. S. Joyce	114	Miss A. C. Wheeler	13
Miss A. E. Kenrick	3	Marshall P. Wilder	43
G. A. Law	29	David Winslow	1
James Leister	3	Mrs. A. D. Wood	102
Frank Lemme	1	E. W. Wood	8
C. H. Lunt	1	W. K. Wood	7

J. H. Woodford . .	$12	Henry Youell . .	$3
D. B. Wooley . .	1		

Amount of Appropriation		$2,400
Prizes awarded	$1,513	
Gratuities awarded	1,281	
Total amount awarded		$2,794

REPORT

OF THE

COMMITTEE ON FRUITS,

FOR THE YEAR 1874,

By HERVEY DAVIS, Chairman.

The season of 1873–4 has been somewhat remarkable in several respects. November and the first part of December, 1873, were the coldest known for many years; the balance of the winter was very mild, the thermometer falling but little if any below zero; and this was followed by a very cold and backward spring and generally cold summer, particularly August, which was remarkable for its cold, damp nights, during several of which in succession, the thermometer fell as low as 52° to 48°. This very cold weather with the very heavy dews, caused the grape vines to mildew, and consequently the failure, to a great extent, of the grape crop of Massachusetts and other New England States. Even the Concord, which has always been considered the most hardy of all grapes, was in some cases nearly ruined, and in all places very much affected by the cold and damp of July and August. September was also colder than usual, but during October and the first half of November, the weather was remarkably pleasant, causing many kinds of grapes to mature and ripen which otherwise would have been entirely worthless. The weekly exhibitions were most of them affected more or less by the lateness of the season, as our schedule of prizes was made out to correspond with that of former seasons, and was not suited to the present, most of the fruits being from ten to fifteen days later than usual; but our exhibitions as a whole during the year have been up to, if not beyond, the average of the past ten years.

Strawberries. — The exhibitions of forced strawberries have been quite equal to those of former seasons, the first being on March 21st, by J. B. Moore, who continued to exhibit every week until May 9th, most of his specimens being very fine. On June 6th and 13th, Charles Garfield exhibited some very fine strawberries from plants raised in a frame from which he removed the glass the last of May. There were no new varieties during the season worthy of particular mention.

June 24th, J. B. Moore was awarded the first prize for early strawberries (Jenny Lind). At the Strawberry Show, July 2d (postponed from June 24th), we had one of the finest exhibitions ever made by this society. There may have been some single dishes of larger and handsomer berries shown in previous years, but never so large a competition for the first prize for the best four quarts of any variety; which prize was awarded to B. G. Smith, of Cambridge, for Jucunda. There were nearly one hundred dishes and baskets of fruit on the tables, which is believed to be the largest number shown at any one time; Jucunda, Triomphe de Gand, President Wilder, and Wilson were the leading varieties. William C. Child was awarded the first prize for the best fifty berries of any variety (President Wilder), which were very fine. The first prize for the best two varieties, four quarts each, was given to J. B. Moore, for Hovey's Seedling and Augusta. Mr. Moore also received the first prize for the best four varieties — Jucunda, President Wilder, Seth Boyden (No. 30), and Triomphe de Gand. John C. Park made a fine display of fifteen varieties of one quart each, for which he was awarded the first prize. We regret that this fine collection was not placed in nice fancy baskets or the society's dishes instead of market baskets, as it would have added very much to his exhibition and also to the general appearance of the tables.

In John B. Moore's collection we noticed the Black Defiance and Champion. Warren Heustis had in his collection the Colonel Cheney, which is a very large and showy strawberry, but unless the quality proves better in future years than the present season, it will not be of great value.. October 10th, Joseph Weston made quite a display of strawberries.

Of Seedlings, J. B. Moore exhibited his No. 1, or Augusta, which has been mentioned in previous years, and was one of the varieties for which he received the first prize; he also had on ex-

hibition his No. 20, or Caroline, which attracted much attention, and is believed to be one of his best, if not the best of his seedlings; fruit large and very fine color, regular in shape, and promises to be a very valuable variety. This was awarded one of the prizes for the best four quarts of any sort. July 2d, Hovey & Co. exhibited two new seedlings from the Wilder, Nos. 10 and 13; berries medium size, color and shape of fruit very much like the Wilder; quality not quite as good. For a more extended description, reference is made to notes of R. Manning, Editor. J. B. Moore also had some new seedlings never before exhibited; for a description, reference is made as above. J. P. Childs presented a seedling which he said was very prolific, but the quality was not good enough to warrant a full description.

Cherries.—As in previous years the Black Eagle, Black Tartarian and Downer were the varieties that received most of the prizes, there being no new varieties offered this season. C. E. Grant exhibited his seedling; but it is so much like the Downer in size, color, and time of ripening, that it can hardly be recognized as a distinct variety. The cherry crop was not as good as last year.

Currants.—The exhibition of currants was much better than that of last season, but not as good as in some previous years. There were no new varieties offered. The Versaillaise and Dana's Transparent were the best varieties shown, and took most of the prizes. There were some Cherry currants shown, but neither the bunches nor berries were as large as in former years when that variety was first introduced. The Red Dutch has almost entirely disappeared from our tables, which is to be regretted, as it was considered of better quality than either the Cherry or Versaillaise, although not as large and showy.

Gooseberries.—The show of this fruit has been very much below the average of former seasons, but much better than that of last year. Of natives, Downing's, Smith's, and Houghton's Seedlings are considered the best and have taken most of the prizes. July 18th, B. G. Smith took the first prize with Downing's; and July 25th, John B. Moore was awarded the first for Smith's; July 25th, B. G. Smith took the first prize for foreign gooseberries, with Wellington's Glory, which were very fine specimens.

Raspberries.—The Hornet, Franconia, and Clarke were the only varieties shown. and of these the Hornet was considered the best

in quality and was very fine—much better than usual. The fruit of all the above varieties was not up to its usual size, but otherwise very handsome. N. B. White exhibited his new seedling, which he claims is a cross between the Clarke and Black Cap, by hybridizing. The fruit is medium size, quality fair, color much like the Philadelphia. Mr. White claims that it will be valuable for a market fruit, as it commences to ripen quite early and continues to fruit for many weeks after other varieties are gone. For a fuller description reference is made to the notes of the editor.

Blackberries. — The prizes have been awarded to the Dorchester, Kittatinny, and Wilson. The Dorchester is believed to be the most valuable for general cultivation here. Those shown this season by James Nugent were very fine and attracted much notice and admiration, and received the first prize. August 1st, George N. Noyes made a very fine show of Wilson and Kittatinny. The crop of blackberries was quite good and continued late in the season.

Nectarines. — At the annual exhibition, John Falconer had some very fine nectarines, of orchard-house culture. E. Brock also had on exhibition a very fine dish of seedlings. J. L. D. Sullivan presented a seedling, which was considered quite valuable as a new variety; color yellowish white, slightly tinged with red; it was tested in comparison with Stanwick and considered to be equal to, if not superior in flavor; medium size and very handsome.

Plums are hardly worthy of mention; the specimens shown this season, though more abundant than last year, would, a few years ago, hardly have been considered worthy of a gratuity; but, as it seems desirable not to lose sight of them altogether, most of the premiums were awarded.

Figs have been about the same as in the past few years. Some very good specimens were shown by Mrs. Fobes, August 29th; and September 15th by Miss Lucy Bowditch and Walker & Co. February 1st, J. Parker received a gratuity for a dish of oranges grown on a tree in his dwelling house.

Peaches. — The exhibitions of forced and orchard-house peaches have been much better than for many years. C. S. Holbrook, as usual, has shown some very fine forced peaches. July 2d, at the strawberry show, he had some very fine Crawford's Early, for which he received the first prize, and also some fine Cooledge's

Favorites. At the annual exhibition, H. H. Hunnewell placed upon the table the largest and best dish of Late Crawfords ever shown at any of our exhibitions, of orchard-house culture. John Falconer made a very fine display of peaches and nectarines, for which he was awarded a Silver Medal. His list comprised the following varieties: Early Crawford, Late Crawford, Large Early York, and the following of Rivers' Seedlings, Albatross, Osprey, Radclyffe, Princess of Wales, Alexandra Noblesse, and Late Admirable peaches; and of nectarines, the Albert Victor and Stanwick Elruge (these two being also new seedlings of Mr. Rivers) and the Stanwick; and the Reine Claude de Bavay and Baxter's Jane plums.

The crop of out-door peaches has been the largest and best for many years. August 29th, there were three dishes of Hale's Early offered that were remarkably fine, and so nearly alike that it required very close comparison to award the first prize; it was awarded to J. L. D. Sullivan. At the annual show it was unanimously remarked "What a fine display of peaches!" There were no new varieties but a great many seedlings, which, however, were old varieties reproduced, either exactly or so nearly that it was very difficult to see any difference, and therefore we have given them no particular description. There were many fine dishes of Crawford's Early and Foster; and also Crawford's Late. The Crawford's Early and Foster were thoroughly tested, and no particular difference discovered; the Crawfords were quite as large and handsome as the Foster.

Apples. — As this is the bearing year for apples, it was generally expected that our exhibitions of this fruit during the season would be much better than last year; and we were not disappointed, for we have had very fine displays at most of the weekly shows, and at the annual exhibition, of this most valuable of all fruits August 8th, the first prize was awarded to Warren Heustis for Red Astrachan, and this variety with Early Bough, Williams, Porter, and Gravenstein received all the prizes for summer apples, there being no new varieties offered. September 5th, the first prize was awarded to the Gravenstein, and the others to the Garden Royal and Foundling. We were glad to see that fine variety, the Garden Royal, which of late years has not been as much cultivated as it ought to be, reappearing upon our tables. It is one of the few apples which can be eaten when we have plenty of good pears. Of medium

size, handsome color, exceedingly fine grained and tender, with a rich flavor and aroma, it is undoubtedly the finest dessert apple of its season, and can be recommended with the utmost confidence to all who desire such an apple. The moderate growth of the tree adapts it to gardens of limited extent. At the annual exhibition the show was very fine, and fully up to the average of past seasons. The first prize for the best twenty varieties was taken by Asa Clement, and for the best fifteen varieties the first prize was awarded to Amos Bates. Some of the prizes for ten varieties were not awarded, owing to some of the varieties being incorrectly named. At the annual exhibition there were four collections of twenty varieties, four of fifteen, four of ten, and four of five; and fifty-seven single dishes, offered for the different prizes, making in all two hundred and fifty-seven plates of apples. The prizes for new varieties were not awarded, there being none shown. On October 10th, the prize day for Autumn Apples, the show was very fine, and the first prize was awarded to Asa Clement for the best five varieties and for the best single dish (Gravenstein).

October 20th, the Fruit Growers' Association and International Show Society of Halifax, N. S., sent this society a large collection of apples for exhibition and comparison with ours of the same varieties; and also for names of many that were unknown. A meeting of the Fruit Committee was called, several other persons well acquainted with our different varieties being also invited to examine this collection; and after a thorough inspection and trial, several varieties that were wrongly named were corrected; but there were many that were new to all present, and which, therefore, could not be named. The Society's Silver Medal was awarded for this large and interesting collection. For a fuller description and names of new varieties, reference is made to notes of R. Manning, Editor.

On the 7th of November, at the exhibition for Winter Apples, Asa Clement took the first prize for the best ten varieties; and for the best single dish, the prize was awarded to J. B. Moore, for Hubbardston. Samuel N. Cox, of St. Joseph, Missouri, sent a large collection of apples which made a very fine show; and to him was awarded the Society's Silver Medal. For a full description, reference is made as above.

Pears.—The crop of pears was not equal to last year's, but about an average one for the past few years. Many of the pear

orchards in the vicinity of Boston suffered very much from the ravages of the slug; in many instances every leaf was eaten and nothing remained upon the trees but the half-grown fruit, and that was entirely worthless.

January 10th, Hovey & Co. exhibited three varieties of winter pears; Josephine de Malines, Doyenne d'Alencon, and Cross, all of them of much value for their keeping qualities.

At the exhibition of winter pears, January 24th, all the prizes were awarded. The first to A. Dickinson for Easter Beurre, Passe Colmar, Winter Nelis, Glout Morceau, and Vicar of Winkfield. These were all in good order and quite handsome; Mr. Dickinson said they had been kept in his barn, protected by being covered with hay. J. H. Fenno was awarded the second prize, and his statement is as follows: "About the first of November, I placed one peck each, of ten varieties of winter pears, in baskets and put them in a cold, damp cellar that was well ventilated; the loss up to the present time, January 24th, was only eight specimens of Beurre d'Anjou and ten of Lawrence. The other varieties were all perfect. At the same time I placed the same quantity and varieties in another cellar that was warmer and without ventilation, and the loss was over fifty per cent. My experience is, that dampness is necessary to prevent shrinkage, so common with winter pears; the bad effect of which is prevented by proper ventilation." The third prize was awarded to H. Partridge, and his statement was, that directly after picking his pears he placed them in a fruit-house and kept them there until about January 1st, when he removed them to his own cellar. At the time he exhibited them they were as hard as when first picked, and we do not believe they would ever have become fit to eat, as several specimens of different kinds were taken for trial and none of them ripened so as to be fit for use, and most of them decayed before they were mellow. J. L. Bird exhibited a very fine dish of Passe Colmar pears. March 21st, Wm. Maloon presented some fine specimens of Winter Nelis.

As before remarked, the season was very backward and many of the weekly exhibitions were affected very unfavorably. July 25th, the first premium day for early pears, there were none offered worthy of a prize. On August 1st, the first prize was awarded to the Doyenne d'Ete. August 15th, all the premiums were awarded to the Beurre Giffard. August 22nd, the exhibition of Clapp's Favorite was very fine. September 5th, the first prize was

given to Samuel Hartwell for Bartletts. We had but very few new varieties presented during the season. At the annual exhibition, Marshall P. Wilder took the first prize for new pears, with the following varieties: Mima Wilder, Eddie Wilder, Grace Wilder, and Bertrand Guinoisseau, and they were considered a very fine collection. This exhibition was very fine, and we had about the usual collections and varieties of former seasons, but nothing to require any very particular description. The first prize was awarded to A. Dickinson, for the following varieties: Bartlett, Beurre d'Anjou, Beurre Superfin, Beurre Bosc, Beurre Clairgeau, Beurre Hardy, Duchesse d'Angouleme, Belle Lucrative, Dana's Hovey, Howell, Louise Bonne of Jersey, Marie Louise, Merriam, Paradis d'Automne, Seckel, Sheldon, Swan's Orange, Urbaniste, St. Michel Archange, and Lawrence. There were many of the same varieties among the other collections. The single dishes of pears offered for prizes consisted of the following: Bartlett, 16; Belle Lucrative, 9; Doyenne Boussock, 11; Sheldon, 8; Louise Bonne of Jersey, 7; Beurre Diel, Winter Nelis, Lawrence and Beurre Hardy, 6 each; Beurre d'Anjou, Beurre Clairgeau, Seckel, Doyenne du Comice, Beurre Superfin, Urbaniste, and Beurre Bosc, five each; Merriam and Swan's Orange, four each; Howell, Paradis d'Automne, and Marie Louise, three each; Duchesse d'Angouleme and Dana's Hovey, two each; Flemish Beauty, one. There were eleven collections of five varieties, four of ten, four of fifteen, and seven of twenty; making in all, four hundred and twenty-five dishes of pears offered for prizes, and one hundred as collections not for premium; and of apples, two hundred and fifty-seven dishes.

Robert Manning placed upon our tables a dish containing two dozen Orange pears from a tree belonging to Capt. Charles H. Allen, of Salem. This tree is two hundred and thirty-five years old; the yield this year was three bushels, and last year eight and a half bushels of sound fruit.

On October 10th the exhibition of Autumn Pears and Apples was very fine and much larger than in former seasons. The Urbaniste and Duchesse of T. M. Davis, and the Beurre Superfin of R. W. Ames, which took the three prizes for single dishes, were remarkably fine. On November 7th, the show of Winter Pears was very good. The dishes most worthy of note were, first, a dish of Beurre d'Anjou from J. H. Fenno; second, one of Dana's Hovey from A. S. M'Intosh; third, one of Lawrence from Jesse Haley;

and, fourth, Winter Nelis belonging to J. L. Bird, to which were awarded the four prizes in the order named. Daniel Cross also had three very fine dishes of pears.

October 3d, Henry McLaughlin presented specimens of the Indian Queen and Eastern Belle, which were equal to any ever before shown. D. W. Lothrop exhibited a seedling said to be from Marie Louise, quality good. F. & L. Clapp presented their seedling, No. 3, which has been named Harris; medium size, flesh white, quality first rate. This is the variety spoken of in the report for 1872 as strongly resembling Beurre Hardy in appearance. It has been fruited for several years by Marshall P. Wilder, who esteems it a pear of first quality and worthy of propagation. Messrs. Clapp exhibited also a dish of Sarah, which was the largest and best ever shown of that variety; also, No. 125, said to be from Urbaniste; medium size, quality much like the Urbaniste; very juicy and spirited. October 22d, a seedling from Seckel was presented, so nearly like it as to require no particular description. November 7th, Messrs. Clapp's seedlings, Nos. 1, 22, and 75, were presented. No. 22, which has been so highly commended in previous reports, was too ripe to judge of, as the originators, owing to the absence of Frederick Clapp and the death of his son, were unable to exhibit it earlier. Mr. Clapp states that it bore very abundantly this year and we have no doubt that if it had been tested when in perfection it would have sustained the high character previously given it.

We wish to avail ourselves of this opportunity to express our sympathy with our associate in the sad bereavement to which we have alluded, and our sorrow for the loss of one who in the short time that he belonged to the society had done so much for horticulture, and given promise of so much more, and whose worth was equalled only by his modesty.

On November 14th, A. McDermott presented a dish of very fine Mount Vernons, the best ever shown of this variety.

Grapes.—Owing to the unfavorable season for native grapes, the show has been unsatisfactory and created but little interest. September 5th, Moore's Early took the first prize. This is one of the seedlings of which Mr. Moore has shown a large number for the past ten years. It resembles the Concord in most respects; quality quite as good, and by some thought to be a little superior, and two weeks earlier, which will make it a valuable acquisition as an early grape

for this section of the country. If we can get a grape as good as the Concord and two weeks earlier, we must be satisfied that we have made some progress in grape culture, in which we are all so much interested. N. B. White was awarded the second prize for his seedling Madeira, which was about equal to those shown last year. His Amber Queen appears to be an early grape and of good quality; but he has not yet presented any bunches that would make it a valuable grape for the market. At the annual exhibition the show was the most inferior there has been for many years, and but very few prizes were awarded. October 3d, there was a little improvement. Horace Eaton took the first prize for a collection, and had some very fine fruit. J. B. Moore was awarded the first prize for a single dish, for Concord.

At the annual exhibition, J. B. Moore presented the following list of seedlings: No. 17, black; large bunch and berry, quality fair; No. 54, black; medium size bunch and berry; No. 60, black; medium size bunch and berry; quality good, resembles the Isabella, but much earlier; No. 16, a white grape with very thin skin; fair quality and good sized bunch; No. 31, also a white grape with medium sized bunch and berry, quality first rate and very early; No. 33, bluish white; good sized bunch and berry; bunch very close and compact; fruit covered with a very rich bloom. E. W. Bull presented his list of seedlings, as follows: Shepherd, black; medium sized bunch and berry; it appears to shed its fruit; Lawson, a white grape; good sized bunch and large berries; not ripe; Rosalie, a red grape; good sized bunch, very foxy, and sheds its fruit; Wales, medium sized bunch; not ripe; Rockwood, a black grape; good sized bunch and large berry, resembling the Concord; Early Black, good sized bunch and berry; quality something like the Hartford; Middlesex, good sized bunch and berry, but not ripe; Louisa, a black grape of good quality, but not quite ripe; Lizzie, white; good sized bunch and berry, but not ripe; Annie, a white grape; good sized bunch and berry, not ripe.

As the season has been very unfavorable for grapes, it is thought best to omit any extended remarks either upon Mr. Moore's or Mr. Bull's seedlings, but to give the names and numbers only, hoping to see them under more favorable circumstances and better perfection, in future years. Hovey & Co. exhibited their new

grape, Cambridge, which compared favorably with those shown in previous years.

The shows of foreign grapes have been about up to the standard of the past few years. Early in the season C. S. Holbrook, C. D. Kingman, Thomas Young, Jr., and H. Partridge were the principal exhibitors. At the annual exhibition F. L. Ames was awarded the first prize, and in his collection were two bunches of Victoria Hamburg, weighing respectively five and one half and four and one half lbs. Mrs. T. W. Ward, as usual, made a very fine display. E. W. Wood's grapes were well grown and of excellent quality. C. D. Kingman and B. G. Smith had some very fine bunches in their collections.

By reference to the schedule of prizes for the coming season, it will be noticed that premiums are offered for the largest bunch of black grapes and also for the largest bunch of white grapes. Let us see what this country can do in the way of large bunches of grapes.

With the exception of pears, no collections of new fruits have been offered for premium.

The annexed list of awards shows the amount of prizes to be $1,290; gratuities $467; leaving an unexpended balance of $243. The committee were very thankful for the liberal appropriation of $2,000, and they have endeavored to use it with discretion; and with the large balance they hope the amount awarded will be approved by the society. The appropriation was increased $100; the amount of awards exceeds that of last year $148.

All which is respectfully submitted.

HERVEY DAVIS,
P. B. HOVEY,
FREDERICK CLAPP,
JOHN B. MOORE,
BENJAMIN G. SMITH,
S. G. DAMON,
ALEXANDER DICKINSON,
} *Committee on Fruits.*

NOTES ON FRUITS.

By R. Manning, Editor.

The following are the notes on fruits shown at the Horticultural Rooms, in the absence of the Fruit Committee, referred to in their Report, and published as supplementary to it.

Strawberries. — *Caroline.* — From John B. Moore, July 6. Large, roundish, irregular; the largest specimens cockscombed but not wrinkled; seeds slightly sunken; color, crimson, polished; flesh scarlet next the outside, paler at the centre, a little open at the heart; flavor rich and sprightly. Foliage large and robust, footstalks long and stout.

Grace.—A new seedling from Mr. Moore, July 7. Large, but not quite as large as Caroline; very irregular in form, furrowed, often with a projecting point on one side; seeds considerably sunken; color, rich polished crimson, paler towards the summit; flesh white, except next the outside, solid, rich, juicy, and fine flavored. Foliage dark green.

Another seedling had large fruit; roundish, conical, and pretty regular in form; seeds slightly imbedded; core large and open; juicy and good. Fruit borne in clusters on very tall and strong stalks.

Late Prolific.—Large; irregular, roundish inclining to cockscomb; color, light crimson; flesh red, somewhat open at core, tolerably firm; of fair quality, pretty rich, but the acid a little harsh.

Champion.—Large; roundish, or sometimes conical and sometimes inclining to cockscomb; seeds deeply sunken; color, deep crimson; flesh red, solid at core, rather firmer than Late Prolific but of similar quality.

All the above were exhibited by Mr. Moore.

Messrs. Hovey & Co., exhibited their seedling, No. 10, from the President Wilder, and strongly resembling it in appearance. It was deficient both in flavor and juice, but had probably been injured by unfavorable weather, so that no conclusive opinion of its merits could be formed. Very much the same may be said of their seedling, No. 13, but it was thought by some to be a little more spirited.

Charles E. Brown, of Yarmouth, Nova Scotia, a zealous member of the Society, sent, on Saturday, July 25, a box of Jucunda strawberries, which were received in the afternoon of Monday, the 27th. The specimens were of good, though rather uneven, size. They were not in as good order as the strawberries generally received from Norfolk, but it could not be expected that fruit sent from a colder to a warmer climate should keep as well as if the conditions were reversed. As far as could be judged the specimens were a little more acid than those grown here.

Raspberries.—July 18, N. B. White exhibited a hybrid raspberry, the parents of which were Clarke and a Black Cap. It was of medium size; roundish; grayish purple; flesh pretty firm and apparently would carry well. The flavor resembles the Black Caps more than the red raspberry. It was not of as good quality as the Clarke. The canes are quite prickly, like the Black Caps. It appears to be early and productive, and is said by Mr. White to be perfectly hardy.

Pears.—Marshall P. Wilder brought in on the 23d of July, a specimen of the Chambers pear received from E. Y. Teas, of Richmond, Indiana, of medium size; globular obtuse pyriform; yellow with blushed cheek dotted with red, and strongly resembling Supreme de Quimper in appearance. Flesh white, pretty firm, tolerably fine and juicy, sweet, a little sprightly and slightly perfumed, tolerably rich, and, though a little astringent, a very good pear for its season. It appears to keep well for a summer pear, the specimen having been sent by mail, and, though several days on the way, arriving in a good state of preservation. It would not ripen so early here, having been grown two and a half degrees further south than Boston. It was originated at Middletown, Kentucky, by Capt. William Chambers, and is a favorite variety in the markets of Louisville.

Mr. Wilder also brought in, on the 12th of October, a seedling pear from S. L. Chase, of Lockport, strongly resembling the Doyenne Boussock in general appearance—perhaps a little more oval —and also in flavor, not having quite enough to be classed as a first rate pear.

On the 4th of November, was tested a specimen of Madame Henri Desportes, grown by Mr. Wilder, which proved of fine quality. Above medium size; broadly turbinate; skin nearly covered with cinnamon russet; flesh white, free from grit, juicy, buttery, sugary

and rich. The fruit resembles Beurre Bosc in color, texture, and quality, and keeps well. The tree is a free grower and productive. Altogether this is one of the most promising new pears. It originated at the nurseries of André Leroy, at Angers, France, and first fruited in 1863.

October 20, Edward S. Ritchie presented a Seckel pear, grown at his garden in Brookline, which was thought to be the largest specimen of that variety ever seen at the rooms. It measured around the middle nine and four-tenths inches, and weighed, when taken from the tree, eight ounces. The quality was excellent.

Asahel Foote, of Williamstown, who exhibited at the meeting of the American Pomological Society here, in 1873, a collection of seedling pears and apples, has the present season sent specimens of several kinds to Marshall P. Wilder and myself, by whom they have been tested with the following results:

Hoosac.—From seed of Hacon's Incomparable, and formerly known as "Hacon Seedling No. 3." Medium size; obovate obtuse pyriform; pale yellow with many russet dots and tracings. Flesh with some grit around the core, juicy and buttery, slightly acid, spirited and rich.

Fall d'Aremberg.—Medium size, roundish, flattened; color, dull yellow and thin russet with a brownish red cheek. It has much of the spirited flavor of the Beurre d' Aremberg, but is not handsome enough to take a place in the list for general cultivation.

Foote's White Seckel.—Small; pyriform, inclining to turbinate; pale yellow with a slight brownish blush; sweet and tolerably juicy. Very unlike other seedlings from the Seckel, which have, so far as we recollect, invariably resembled their parent in color. This appears, in losing the Seckel color, to have lost the peculiar flavor and aroma which makes that variety so highly prized.

Christmas Beurre, or "Seedling Virgalieu, No. 4."—Full medium size; ovate pyriform; dull green with thin russet towards the stem and sometimes sprinkled with red next the sun; somewhat stony at core, juicy and rich. "Very good" to "best." Mr. Foote says it was in eating last year till into January. No affinity to its parent, the White Doyenne, or Virgalieu of New York, was noticed.

Foote's Seckel.—This has been highly commended by eminent pomologists, but the specimens received this year were hardly as good as the old Seckel. In form it is rounder and more flattened.

Mr. Foote states that it is an abundant bearer, and has a great advantage over the parent in its remarkable uniformity of size.

Seedling Apple.—From the Northern Spy; large; slightly conical, with a large basin around the stem like its parent; color brighter red than the parent, with a thin russet like the Hubbardston. In flavor thought to resemble Hubbardston more than Spy, but texture less firm than the former.

All Mr. Foote's specimens were tested the latter part of October.

Apples.—On the 20th of October a fine collection of one hundred and twenty-five varieties of apples and fifty varieties of pears was received from the Fruit Growers' Association and International Show Society, of Halifax, Nova Scotia. Many of these were of English origin, and, though known by reputation, so seldom seen here that it was gratifying to become acquainted with them by personal examination. Of those which are grown here, some were larger, some smaller than ours; some more, some less highly colored, but the average not far from that of ours of the same kinds. A very striking peculiarity, which we have before remarked in apples of Nova Scotia growth, was that many of the kinds which here are quite regular in form, were in this collection strongly ribbed. such as Dutch Codlin, (the specimens of which were very large), Fall Pippin, Canada Reinette, Porter, Red Pumpkin Sweet, etc. Others, not known here, which were strongly ribbed, would, it is reasonable to suppose, be much more regular if grown here. In quality the apples were deemed generally not quite as good as our specimens of the same varieties. They were also thought to be more spongy and less solid than our apples, which was unexpected, as it is generally found that apples grown to the north of us — in Maine or New Hampshire, for instance — are more solid and keep later than ours.

The Early Boughs were remarkably fine specimens, and the Northern Spys entirely free from the fungus which is so apt to attack it here. The Yellow Bellflowers, Porters, and Broadwells were also fine specimens.

Of the varieties new or little known here the following were noted as most interesting: —

Bishopsbourne.—Medium size; long, conical; pale yellow with bright carmine cheek; sweet and good. A native of Nova Scotia.

Blenheim Pippin.—Large, handsome, and good. English.

Calkins' Pippin.—Large; regular; greenish yellow streaked with red through which dots of green show; pleasant acid.

Chebucto Beauty.—Very large and very handsome; conical; whitish yellow with bright red stripes. Not of fine flavor for dessert but good for cooking. It was received from a nursery in the United States, and, the name being lost, it received that above given, but was not recognized here. It strongly resembles the Alexander, but is larger.

Chenango Strawberry.—Very long, conical; pale yellow streaked with light red.

Colvert.—Medium size; flattened, conical; greenish yellow striped with dull red; flesh firm, subacid.

Cooper's Market.—Large; long, conical; white with faint streaks and dots of red.

Cornish Gilliflower.—This one of the favorite English dessert apples. The specimens were of rich color and flavor.

Flat Pippin.—Looks like Rhode Island Greening, but more ribbed and finer grained.

Franklin's Golden Pippin.—Larger than the Golden Pippin; extremely sharp acid.

Golden Pippin.—This little apple is perhaps the most celebrated of all the old English dessert varieties; small; round; traced with russet, very rich.

Gravenstein.—Besides good specimens of this variety, of the ordinary type, the collection comprised the most remarkable sport we have ever seen; of a bright crimson color; in flavor similar to that usually found in this variety, though not precisely like it, approaching that of the Red Astrachan.

Grimes' Golden Pippin.—Medium size; long; yellow; good quality.

Morton's Red.—Medium size; very handsome, being entirely covered with brilliant red; pleasant acid, quality fair.

Munson Sweet.—Medium size; flattened, somewhat angular; yellow, sometimes with a warm red cheek; good.

Nonpareil.—Resembles Roxbury Russet, but larger and more ribbed; a late keeper. An old English variety and one of the most esteemed.

Paradise Pippin.—Medium size; very long, slightly conical; pale yellow, the sunny side nearly covered with red and dotted with buff; fine flavored, and one of the best, if not the best, of the

whole collection. The name is said to be local, but the variety was not recognized as known by any other name.

Perry Russet.—Large ; conical, somewhat ribbed ; has a reddish cheek like Hunt Russet, though not so brilliant ; rather acid and of coarse texture.

Rose.—A handsome autumn apple ; conical, flattened ; streaked and clouded with red.

Rymer.—Medium size ; bright red ; sprightly acid. English.

Wilton Sweet.—Large ; flattened, ribbed ; yellow with red cheek ; not of first quality.

Yellow Newtown Pippin.—Deficient in flavor, needing a warmer climate.

Among the well known standard varieties of Canada were the Pomme Gris, Fameuse, Bourassa, Canada Reinette, and St. Lawrence, of all which the specimens were fine.

The pears were not up to the standard of those grown here, in any respect. Some, such as Beurre d'Anjou, were very highly colored, but in size the majority were below that of ours, and in flavor a very marked deficiency was noticed. It is evident that the pears were much more unfavorably affected by the climate of Nova Scotia than the apples, but it should be recollected that both apples and pears were picked early for exhibition at Halifax and were shown there for a week. If they had remained on the trees two or three weeks longer the quality of the late kinds would, doubtless, have been much improved.

Samuel N. Cox, of St. Joseph, Missouri, sent for exhibition on the 7th November a collection of fifty-two varieties of apples, all handsome specimens, and many extra fine. Among the latter were the Wine apple or Hay's Winter, the Fallawater, and particularly the Yellow Bellflower. Like most southern grown apples, those in this collection were less solid than such as are raised here. The following were noted as among the most interesting : —

Ben Davis.—Large ; conical ; pale yellow nearly covered with lively red ; of fair quality but rather dry. From its early productiveness, late blooming after spring frosts are over, good size, fair even fruit, and keeping and carrying well, it is very popular in all the Southwest and West.

Buckingham.—Medium size ; red, covered with bloom ; brisk acid. One of the most popular varieties in the Southern and Southwestern States.

Domine.—Large; flat; nearly covered with red stripes; sprightly. Very extensively planted in the West.

Fall Red.—Medium size; striped.

Huntsman's Favorite.—Medium size; fair; yellow.

Jersey Black.—Medium size; flattened; dark red with yellow dots; flesh rather dry but good.

Lady Finger.—Medium size; long, slightly conical; rather light red; very good.

London Pippin.—Very large; flat; pale green and red; good.

McAfee's Nonsuch.—Large; flattened; nearly covered with red; very firm flesh; flavor resembling the Siberian crab.

McDowell's Fall.—Large; conical; striped, red.

Missouri Red.—(Nickajack of Downing.) Large; flattened; dark dull red, with bloom; flesh yellow with very brisk acid; keeps late Tree hardy and productive, and hence very widely disseminated in sections of the South and Southwest. It is said to reproduce itself from seed so nearly that the seedlings cannot be distinguished from the parent.

Nursery Sweet.—Medium size; flattened; yellow with red stripes.

Ortley.—Not as high flavored as when grown here, but much larger and fairer.

Rambo.—Medium size; roundish, deeply sunken at eye and stem; red and yellow; flesh tender and good.

Red Janet.—Hardly of medium size; conical; nearly covered with red through which yellow dots appear. Good.

Rawle's Janet.—Larger than the preceding, with less red, more firmness, and richer flavor. Much cultivated in the South and Southwest for its late keeping, hardiness, and freedom from injury by spring frosts, but of no value here.

Vandevere.—Flat; green, somewhat striped; spirited and rich.

White Winter Pearmain.—Large; conical; pale green with a brownish blush; good. Highly esteemed at the West.

Willow Twig.—Very large; somewhat conical; nearly covered with red stripes. Though not of the best quality, its late keeping, productiveness, and hardiness make it one of the most popular in the rich soils of the West.

Winesap.—Full medium size; conical; dark red; flesh yellow and rich. This and the Lady Finger were thought the two best eating apples in the collection.

Monstera.—Hovey & Co., exhibited on the 26th of September, a fruit of *Monstera deliciosa* (formerly known as *Philodendron pertusum*). It is a hothouse plant, belonging to the order *Araceæ*, which also includes the *Richardia Africana*, so generally cultivated under the name of Calla, and is a native of Mexico and the West Indies. Messrs. Hovey have fruited it for two or three years, being, so far as is known, the first to produce the fruit in this country. The following account, condensed mainly from the "Gardener's Chronicle" for 1864, p. 962, with some additions and amendments by Charles M. Hovey, agrees with the fruit ripened by them.

The plant produces from six to eight flower spikes at a time, these being changed in twelve months into an equal number of succulent fruits. The flower spikes are produced from the main stem on stalks about a foot in length, and are each about eight inches long and five inches in circumference. The sessile flowers, which form a close cylindrical spike or spadix, are arranged in a spiral manner, and consist of hexagonal fleshy bodies, marked on the face with an oblong umbilicate scar, representing the stigma, and with the short stamens protruding from between them. The spadix is wrapped round by a broad pale-colored spathe, which resembles that of an immense Calla.

The spadix, when in the fruiting state, becomes somewhat thicker than when in flower, but without otherwise materially changing in appearance. Each "fruit," that is each succulent compound spike, attains about a pound in weight, and is found to be composed, like the pineapple, of numerous "pips," which are arranged in a spiral manner around a central column, from which, however, and from each other, unlike the pineapple, they separate readily when ripe. When whole the surface of the fruit is marked into as many separate hexagonal meshes as there are pips, each being from a quarter to three-eighths of an inch across, of a sage green, somewhat depressed around the centre, which is elevated in the form of a small oblong scar. This green portion separates from the edible portion, when ripe, in the form of a rind or scale, nearly the eighth of an inch in thickness. Each pip has its upper end hexagonal, as just mentioned, but below it assumes the form of a blunt, square-ended wedge, so that it has a linear-oblong attachment of about one-fourth of an inch long, whence a spiral series of linear-oblong depressions, surrounded by short dark-colored scales, becomes marked on the central column. The wedge

shaped pips are the eatable portion, of a fine fibry texture, and full of a rich fragrant juice, the flavor and aroma of which is something like that of a pineapple and banana combined, very luscious and pleasant to the taste, but soon satisfying. Unless fully ripe the fruit contains some minute crystals or spiculæ which are quite irritating to the mouth. The fragrance is so powerful that a single fruit will fill the whole of the house in which it grows with a delicious perfume.

The plant has a scrambling mode of growth adapting it for creeping over massive rockwork, or the back wall of a tropical house. The stout stem, as thick as a man's wrist, produces numerous pendent aërial roots, often as thick as one's finger and eight or ten feet long. The leaf is upwards of two feet across, of a blunt ovate heart-shaped figure, and furnished between the principal veins with several series of oblong perforations, while the margin is deeply slashed half-way to the midrib in a pinnatifid manner. The young leaf is at first beautifully rolled up like a roll of paper, and as it keeps unfolding the points are held up by threads until they are able to bear their own weight. Without these filaments the tender portions of the leaf would not be able to support themselves. Irrespective of its fruit-bearing quality the whole plant is most curious and interesting, whether we consider its singular perforated and gashed leaves, the long roots which it sends out into the air and along the ground, or the peculiar inflorescence. It has been used with excellent effect in subtropical gardening for which its striking appearance well adapts it. Messrs. Hovey have found it, in our somewhat semi-tropical climate, to succeed admirably bedded out, or plunged in a pot, during the summer months, its immense curiously perforated and deep green coriaceous leaves being especially novel, attractive, and beautiful. In England houses have been built solely for the cultivation of this plant for the sake of its fruit.

PRIZES AND GRATUITIES AWARDED FOR FRUITS.

January 10.

Gratuity:—

To Hovey & Co., for Winter Pears, ... $2 00

January 24.

Winter Pears.—For the best exhibition of Winter Pears, not less than five varieties, twelve specimens each, with a particular statement in writing of the method by which they were kept, to Alexander Dickinson, ... 10 00

For the second best, to J. H. Fenno, . . . 5 00

For the third best, to Horace Partridge, . . . 3 00

Gratuities:—

To J. L. Bird, for Pears, ... 2 00

J. McClure, " " 1 00

Horace Partridge, for Pears, ... 2 00

February 14.

Gratuity:—

To Horace Partridge, for Duchess d'Angouleme Pears, 1 00

February 21.

Gratuity:—

To J. Parker, for a Dish of Oranges, ... 2 00

March 21.

Gratuities:—

To William Maloon, for very fine Winter Nelis Pears, . 1 00

John B. Moore, for Triomphe de Gand Strawberries, 1 00

March 28.

Gratuity:—

To John B. Moore, for Triomphe de Gand Strawberries, 1 00

April 4.

Gratuity:—

To J. H. Fenno, for fine Easter Beurre Pears, . . $1 00

April 11.

Gratuity:—

To John B. Moore, for forced Strawberries, . . . 1 00

April 25.

Gratuity:—

To John B. Moore, for forced Strawberries, . . . 2 00

May 2.

Gratuity:—

To John B. Moore, for forced Strawberries, . . . 2 00

May 9.

Gratuity:—

To John B. Moore, for a very fine basket of forced Strawberries, ... 3 00

June 6.

Gratuity:—

To Charles Garfield, for Triomphe de Gand Strawberries, 5 00

June 13.

Gratuity:—

To Charles Garfield, for Strawberries, ... 4 00

ROSE SHOW.

June 24.

Early Strawberries.—For the best four quarts, open culture, to John B. Moore, for Jenny Lind, . . 10 00

For the second best, to W. C. Child, for Wilson, . 8 00

For the best two quarts of Jenny Lind, to John B. Moore, ... 4 00

For the best two quarts of any other sort, to John B. Moore, for Augusta, ... 4 00

Gratuities:—

To Charles Garfield, for Strawberries,	. . . . .	$5 00
W. C. Child, " "	. . . . .	3 00
W. G. Prescott, " "	. . . . .	2 00
W. P. Walker, " "	. . . . .	2 00
C. S. Holbrook, for forced Peaches,	. . . .	10 00

JUNE 27.

Gratuities:—

To Charles Garfield, for Strawberries,	. . . . .	4 00
B. G. Smith, " "	. . . . .	2 00
G. M. Mellen " "	and Cherries, .	2 00

STRAWBERRY SHOW.

JULY 2.

STRAWBERRIES IN BASKETS.—For the best four quarts of any variety, to Benjamin G. Smith, for Jucunda, . 15 00

For the second best, to Charles Garfield, for Triomphe de Gand, ... 10 00

For the third best, to John B. Moore, for Caroline, . 5 00

For the best two varieties, of four quarts each, to John B. Moore, for Hovey's Seedling and Augusta, . 20 00

For the second best, to Warren Heustis, for Jucunda and Col. Cheney, ... 15 00

For the third best, to John B. Moore, for Champion and Black Defiance, ... 10 00

For the best four varieties, of two quarts each, to John B. Moore, for Jucunda, President Wilder, Seth Boyden, and Triomphe de Gand, ... 15 00

For the second best to Warren Heustis, for Col. Cheney, Fillmore, Seth Boyden, and Wilson, . 10 00

For the third best to John B. Moore, for Wilson, Lady of the Lake, Charles Downing, and Hovey's Seedling, ... 5 00

For the best collection, of one quart each, not less than six varieties, to John C. Park, (fifteen varieties). 10 00
For the second best, to Benjamin G. Smith, (six varieties) 8 00
For the best fifty berries of any variety, to be shown in a single layer on the Society's dishes, to W. C. Child, for President Wilder, ... 5 00
For the second best, to John B. Moore, for Late Prolific, ... 3 00
For the best two quarts of Agriculturist, to William G. Prescott, ... 4 00
For the best two quarts of Jucunda, to John C. Park, 4 00
" " " President Wilder to Joseph Burnett, ... 4 00
For the best two quarts of Triomphe de Gand, to A. W. Felton, ... 4 00
For the best two quarts of Wilson, to Geo. W. Wilson 4 00
" " " Seth Boyden (No. 30), to John C. Park, ... 4 00
For the best two quarts of any other sort, to John B. Moore, for Caroline, ... 4 00

Cherries.—For the best four varieties, of two quarts each, to C. E. Grant, for Elton, Black Eagle, Black Heart, and Black Tartarian, ... 6 00
For the best two quarts of any variety, to I. P. Langworthy, for Knight's Early Black, . . . 4 00
For the second best, to W. K. Wood, for Black Eagle 3 00
For the third best, to W. K. Wood, for Black Tartarian, ... 2 00

Grapes.—For the best two bunches of any variety, to C. S. Holbrook, for White Frontignan, . . . 4 00

Forced Peaches.—For the best twelve specimens of one variety, to C. S. Holbrook, for Crawford's Early . 8 00
For the second best, to C. S. Holbrook, for Cooledge's Favorite, ... 6 00

Gratuities:—

To George W. Pierce, for Strawberries, ... 3 00
D. B. Flint, " " 2 00
W. C. Child, " " 2 00
W. C. Strong, " " 2 00

JULY 11.

CURRANTS.—For the best four quarts of a red variety, to J. H. Woodford, for Versaillaise,	$4 00
For the second best, to C. W. Chamberlain, for Versaillaise,	3 00
For the third best, to Charles Garfield, for Versaillaise	2 00
For the best four quarts of a white variety, to J. H. Woodford, for Dana's Transparent,	3 00
For the second best, to Benjamin G. Smith, for Dana's Transparent,	2 00
CHERRIES.—For the best late variety, two quarts, to C. F. Curtis, for Downer,	4 00
For the second best, to W. G. Prescott, for Downer.	3 00
For the third best, to J. E. M. Gilley, for Downer	2 00
Gratuities:—	
To Charles Garfield, for Triomphe de Gand Strawberries	2 00
J. C. Park, for collection of Strawberries,	4 00
C. E. Grant, for collection of Cherries,	4 00
Phineas J. Stone, for Cherries,	1 00
J. E. M. Gilley, " "	1 00
H. Partridge, " "	1 00
J. H. Fenno, " "	1 00
Samuel Hartwell, for Cherries and Currants,	3 00
R. W. Turner, for Forced Peaches	4 00

JULY 18.

RASPBERRIES.—For the best collection, of not less than four varieties, one quart each, to John B. Moore,	5 00
For the best two quarts of any variety, to Charles Garfield, for Franconia,	4 00
For the second best, to Mrs. E. M. Gill, for Franconia,	3 00
For the third best, to John B. Moore, for Clarke,	2 00
CURRANTS.—For the best collection, of not less than four varieties, two quarts each, to Amos Bates,	5 00
For the second best, to B. G. Smith,	3 00
For the best four quarts of any kind, to F. & L. Clapp, for Versaillaise,	4 00
For the second best, to B. G. Smith, for Versaillaise,	3 00
For the third best, to Warren Heustis,	2 00

Gooseberries.—For the best two quarts, to B. G. Smith, for Downing's Seedling, ... $4 00
For the second best, to Mrs. E. M. Gill, for Smith's Seedling, ... 3 00

Gratuities:—

To J. C. Park, for Strawberries, ... 1 00
J. H. Fenno, for Downer Cherries, ... 1 00
Elisha Tower, for Currants, ... 1 00
A. Dickinson, for Gooseberries, ... 1 00
B. B. Davis, " " 1 00
W. C. Child, for Raspberries, ... 1 00
N. B. White, for Seedling Raspberries, . . . 2 00
C. D. Kingman, for Peaches, ... 2 00

July 25.

Gooseberries.—For the best two quarts of native, to John B. Moore, for Smith's Seedling, . . . 3 00
For the second best, to B. G. Smith, for Downing's Seedling, ... 2 00
For the best two quarts of foreign, to B. G. Smith, for Wellington's Glory, ... 3 00

Gratuities:—

To John B. Moore, for Clarke and Hornet Raspberries, . 3 00
Horace Eaton, for Currants, ... 1 00
B. G. Smith, for Versaillaise Currants, . . . 2 00
Elisha Tower, for Gooseberries, ... 1 00
R. W. Turner, for Nectarines and Figs, . . . 3 00
Thomas Young, Jr., for Black Hamburg Grapes, . 3 00
Mrs. E. M. Gill, for collection of Fruit, . . . 3 00
J. H. Fenno, " " " . . . 2 00
Charles Garfield, " " " . . . 3 00

August 1.

Blackberries.—For the best two quarts, to James Nugent, for Dorchester, ... 5 00
For the fourth best, to Benjamin B. Davis, for Dorchester, ... 2 00
Pears.—For the best, to Warren Heustis, for Doyenne d'ete, ... 4 00

For the second best, to C. E. Grant, for Madeleine, $3 00
For the third best, to J. H. Fenno, for Beurre Giffard, ... 2 00

Gratuities:—

To John B. Moore, for Raspberries, ... 2 00
Mrs. E. M. Gill, " " 1 00
Charles Garfield, " " 2 00
B. G. Smith, for collection of Gooseberries, . . 2 00
W. C. Child, for Blackberries, ... 2 00

AUGUST 8.

PEARS.—For the best, to John L. Bird, for Beurre Giffard, ... 4 00
For the second best, to Charles Bird, for Beurre Giffard, ... 3 00
For the third best, to Warren Heustis, for Beurre Giffard, ... 2 00
APPLES.—For the best, to Warren Heustis, for Red Astrachan, ... 4 00
For the second best, to B. B. Davis, for Early Bough, 3 00
For the third best, to B. G. Smith, for Red Astrachan, 2 00

Gratuities:—

To Charles Garfield, for Gooseberries and Raspberries, . 2 00
B. G. Smith, for Raspberries and Currants, . . 3 00
James Nugent, for fine Blackberries, . . . 3 00
W. C. Child, for Blackberries, ... 1 00
J. H. Fenno, for collection of Pears, . . . 3 00
C. D. Kingman, for forced Peaches, ... 2 00

AUGUST 15.

EARLY APPLES.—For the best collection, not less than five varieties, to John B. Moore, ... 10 00
For the second best, to Asa Clement, . . . 6 00
For the best Large Yellow Bough, to B. B. Davis, . 3 00
For the best Red Astrachan, to Warren Heustis, . 3 00
For the best Williams, to C. F. Curtis, . . . 3 00
For the best of any other variety, to John B. Moore, for Foundling, ... 3 00

Pears.—For the best, to A. Dickinson, for Beurre Giffard,	$4 00
For the second best, to Warren Heustis, for Beurre Giffard,	3 00
For the third best, to John L. Bird, for Beurre Giffard,	2 00
Gratuities:—	
To J. B. Moore, for Raspberries,	2 00
Charles Garfield, for Raspberries,	1 00
James Nugent, for Blackberries,	2 00
G. N. Noyes, " "	2 00
W. J. Griggs, " "	1 00
J. H. Fenno, for Pears,	1 00
Mrs. S. Joyce, for Tyson Pears,	1 00
C. C. Shaw, for collection of Apples.	4 00
C. D. Kingman, for Peaches,	4 00
M. H. Sampson, for Grapes,	5 00

August 22.

Plums.—For the best, to Amos Bates, for Green Gage,	4 00
For the second best, to J. H. Fenno, for Washington,	3 00
Pears.—For the best Clapp's Favorite, to Warren Heustis,	4 00
For the second best, to T. M. Davis,	3 00
For the third best, to C. F. Curtis,	2 00
For the best of any other variety, to Walker & Co., for Tyson,	4 00
For the second best, to Charles Bird, for Rostiezer,	3 00
For the third best, to W. P. Plimpton, for Supreme de Quimper,	2 00
Peaches, Cold-house or Pot Culture.—For the second best, to C. D. Kingman, for Early Crawford,	4 00
Gratuities:—	
To James Nugent, for Blackberries,	1 00
G. N. Noyes, for Apples and Blackberries,	3 00
C. F. Curtis, for Williams Apples,	1 00
W. B. Parsons, for Red Astrachan Apples,	1 00
J. H. Fenno, " " " "	1 00

To G. M. Mellen, for Apples, ... $1 00
B. B. Davis, " " 1 00
John B. Moore, for Peaches and Apples, . . . 3 00
Joseph K. Manning, for Peaches, ... 1 00
J. E. M. Gilley, " " 1 00
Joseph Clark, for collection of Plums, . . . 2 00
C. D. Kingman, for Grapes, ... 2 00
Mrs. B. Fobes, for Figs, ... 1 00

AUGUST 29.

PEARS.—For the best collection, not less than five varieties, to A. Dickinson, ... 8 00
For the second best to J. H. Fenno, . . . 5 00
For the third best, to C. F. Curtis, ... 4 00
For the best Bartlett, to T. M. Davis, . . . 4 00
For the second best, to C. F. Curtis, . . . 3 00
For the third best, to Charles Bird, ... 2 00
PLUMS.—For the best collection, not less than four varieties, to Amos Bates, ... 4 00
For the second best, to Joseph Clark, . . . 3 00
PEACHES.—For the best, to J. L. D. Sullivan, for Hale's Early, ... 5 00
For the second best, to A. Dickinson, for Hale's Early, ... 4 00
For the third best, to J. B. Moore, for Hale's Early, 3 00

Gratuities:—

To N. N. Dyer, for Apples, ... 1 00
Walter Russell, for Gravenstein Apples, . . . 1 00
Mrs. Mary Dusseault, for Williams Apples, . . 1 00
G. N. Noyes, for collection of Apples and Blackberries 3 00
Mrs. E. M. Gill, for Pears, ... 1 00
Mrs. S. Joyce, " " 1 00
A. Hatch, for Grapes, ... 2 00
Mrs. B. Fobes, for Figs, ... 2 00
Benjamin G. Smith, for collection, ... 3 00
Mrs. Draper, " " 2 00
N. B. White, " " 2 00

SEPTEMBER 5.

NATIVE GRAPES.—For the best dish of six bunches, to John B. Moore, for Moore's Early, . . . $5 00
For the second best, to Charles Garfield, for Creveling, 4 00
For the third best, to N. B. White, for Madeira, . 3 00
APPLES.—For the best, to Asa Clement, for Gravenstein, 5 00
For the second best, to J. H. Fenno, for Gravenstein, 4 00
For the third best, to Edwin Fletcher, for Garden Royal, ... 3 00
For the fourth best, to Asa Clement, for Foundling, 2 00
PEARS.—For the best, to Samuel Hartwell, for Bartlett, . 5 00
For the second best to A. S. M'Intosh, for Tyson, . 4 00
For the third best, to T. M. Davis, for Doyenne Boussock, ... 3 00
For the fourth best, to C. W. Chamberlain, for Bartlett, ... 2 00

Gratuities:—

To G. N. Noyes, for Blackberries, ... 2 00
Charles Garfield, for Blackberries, ... 1 00
B. G. Smith, for Apples, ... 1 00
N. B. White, " " 1 00
J. H. Fenno, " " 2 00
C. M. Atkinson, for Pears, ... 1 00
G. M. Mellen, " " 1 00
N. B. White, " " 1 00
J. C. Park, " " 1 00
John L. Bird, " " 2 00
C. H. Curtis, for collection of Pears and Peaches, . 2 00
Mrs. E. M. Gill, for Foster Peaches, ... 1 00
John B. Moore, for Peaches, ... 2 00
C. E. Grant, " " 1 00
F. R. Shattuck, for Seedling Peaches, . . . 1 00
Orra May, for Seedling Nectarines, ... 2 00
E. Appleton, for Plums, ... 1 00
C. D. Kingman, for Grapes, ... 3 00
H. Partridge, " " 1 00

ANNUAL EXHIBITION.

SEPTEMBER 15, 16, 17, AND 18.

APPLES.—For the best twenty varieties, to Asa Clement,	$25 00
For the second best, to J. H. Fenno,	20 00
For the third best to Hovey & Co.,	15 00
For the best fifteen varieties, to Amos Bates,	15 00
For the second best, to James Eustis,	12 00
For the third best, to Josiah Newhall,	10 00
For the fourth best to Samuel Hartwell,	8 00
For the second best ten varieties, to Benjamin G. Smith,	8 00
For the best five varieties, to William A. Crafts,	6 00
For the second best, to E. W. Wood,	5 00
For the third best, to John L. De Wolf,	4 00
For the best Baldwin, to John L. Bird,	3 00
For the second best, to C. W. Chamberlain,	2 00
For the best Gravenstein, to Asa Clement,	3 00
For the second best, to Walter Russell,	2 00
For the best Hubbardston, to John B. Moore,	3 00
For the second best, to J. T. Foster,	2 00
For the best Northern Spy, to John B. Moore,	3 00
For the second best, to Amos Bates,	2 00
For the best Porter, to Miss A. C. Wheeler,	3 00
For the second best, to Amos Bates,	2 00
For the best Rhode Island Greening, to Horace Eaton,	3 00
For the second best, to E. W. Wood,	2 00
For the best Roxbury Russet, to B. G. Smith,	3 00
For the second best, to W. A. Crafts,	2 00
For the best Foundling, to John B. Moore,	3 00
For the second best, to Asa Clement,	2 00
PEARS.—For the best twenty varieties, to A. Dickinson,	25 00
For the second best, to Hovey & Co.,	20 00
For the third best, to J. H. Fenno,	15 00
For the fourth best, to W. R. Austin,	10 00
For the best fifteen varieties, to Charles Bird,	15 00
For the second best, to John L. De Wolf,	12 00
For the third best, to W. A. Crafts,	10 00
For the fourth best, to John C. Park,	8 00

For the best ten varieties, to Jesse Haley,	$10 00
For the second best, to W. S. Janvrin,	8 00
For the third best, to William T. Hall,	6 00
For the fourth best, to Warren Heustis,	4 00
For the best five varieties, to C. F. Curtis,	6 00
For the second best, to John B. Moore,	5 00
For the third best, to John McClure,	4 00
For the fourth best, to Jacob Eaton,	3 00
For the best collection of not less than four varieties, not previously exhibited, to Marshall P. Wilder,	10 00
For the best Bartlett, to Charles Bird,	3 00
For the second best, to W. P. Walker,	2 00
For the best Belle Lucrative, to G. M. Mellen,	3 00
For the second best, to Horace Eaton,	2 00
For the best Beurre d'Anjou, to W. T. Hall,	3 00
For the second best, to C. W. Chamberlain,	2 00
For the best Beurre Bosc, to G. S. Curtis,	3 00
For the second best, to T. M. Davis,	2 00
For the best Beurre Hardy, to C. F. Curtis,	3 00
For the second best, to C. W. Chamberlain,	2 00
For the best Beurre Superfin, to C. E. Richardson,	3 00
For the second best, to T. M. Davis,	2 00
For the best Dana's Hovey, to C. E. Richardson,	3 00
For the second best, to Hovey & Co.,	2 00
For the best Beurre Clairgeau, to C. F. Curtis,	3 00
For the second best, to C. W. Chamberlain,	2 00
For the best Doyenne du Comice, to W. S. Janvrin,	3 00
For the second best, to W. P. Walker,	2 00
For the best Duchesse d'Angouleme, to C. F. Curtis,	3 00
For the second best, to C. W. Chamberlain,	2 00
For the best Doyenne Boussock, to W. P. Plimpton,	3 00
For the second best, to E. W. Wood,	2 00
For the best Howell, to Charles Bird,	3 00
For the second best, to Mrs. F. Nichols,	2 00
For the best Lawrence, to W. T. Hall,	3 00
For the second best, to Jesse Haley,	2 00
For the best Louise Bonne of Jersey, to Jesse Haley,	3 00
For the second best, to T. M. Davis,	2 00
For the best Marie Louise, to C. W. Chamberlain,	3 00
For the second best, to C. F. Curtis,	2 00

For the best Merriam, to C. F. Curtis,	$3 00
For the second best, to Warren Heustis,	2 00
For the best Beurre Diel, to Wm. P. Walker,	3 00
For the second best, to T. M. Davis,	2 00
For the best Paradis d'Automne, to J. L. Bird,	3 00
For the second best, to Jesse Haley,	2 00
For the best Seckel, to T. M. Davis,	3 00
For the second best, to C. E. Grant,	2 00
For the best Sheldon, to C. F. Curtis,	3 00
For the second best, to W. S. Janvrin,	2 00
For the best Swan's Orange, to Horace Eaton,	3 00
For the second best, to Hovey & Co.,	2 00
For the best Urbaniste, to Walker & Co.,	3 00
For the second best, to J. L. Bird,	2 00
For the best Winter Nelis, to J. L. Bird,	3 00
For the second best, to A. T. Brown,	2 00
For the best Flemish Beauty, to A. T. Brown,	3 00
Peaches.—For the best collection, to John B. Moore,	10 00
For the second best, to A. Dickinson,	8 00
For the third best, to E. Tower,	6 00
For the fourth best, to Samuel Hartwell,	4 00
For the best single dish, to J. Preston,	4 00
For the second best, to H. W. Wilson,	3 00
For the third best, to Mrs. E. M. Gill,	2 00
Plums.—For the best collection, to Mrs. T. W. Ward,	5 00
For the second best, to J. M. Codman,	4 00
For the best single dish, to Mrs. T. W. Ward,	3 00
For the second best, to Samuel Pratt,	2 00
For the third best, to Stiles Frost,	1 00
Foreign Grapes.—For the best six varieties, two bunches each, to F. L. Ames,	12 00
For the second best, to C. S. Holbrook,	10 00
For the third best, to C. M. Atkinson,	8 00
For the best four varieties, to E. W. Wood,	8 00
For the second best, to C. D. Kingman,	6 00
For the third best, to B. G. Smith,	4 00
For the best three varieties, to Mrs. T. W. Ward,	6 00
For the best two varieties, to Mrs. T. W. Ward,	5 00
For the fourth best, to C. E. Grant,	2 00
Native Grapes.—For the best five varieties, six bunches each, to John B. Moore,	8 00

For the second best, to B. B. Davis,	$6 00
For the best Hartford, to J. B. Moore,	3 00
For the second best, to A. W. Felton,	2 00
For the best Isabella, to J. L. Bird,	3 00
For the best of any other sort, to J. B. Moore, for Moore's Early,	3 00

Gratuities for Apples:—

To C. C. Shaw, for collection,	10 00
F. M. Belcher,	2 00
C. Osgood,	2 00
D. W. Stowers,	2 00
C. E. Churchill,	2 00
Dennis Hogan,	2 00
G. N. Noyes,	1 00
J. E. M. Gilley,	1 00
N. F. Bruce,	2 00
W. T. Hall,	4 00
C. C. Shaw,	2 00
Edward Sumner,	4 00

Gratuities for Pears:—

To John L. Bird, for collection,	10 00
Charles H. Allen, for Orange Pears,	2 00
C. E. Grant,	4 00
J. C. Appleton,	2 00
Josiah Crosby,	3 00
William C. Child,	2 00
F. M. Ricker,	3 00
D. W. Stowers,	1 00
J. B. Moore,	1 00
Walker & Co.,	1 00
Hovey & Co.,	1 00
Edward Sumner,	2 00
E. W. Wood,	3 00
C. E. Richardson,	1 00
Mrs. Draper,	1 00
Lewis Slack,	2 00

Gratuities for Peaches:—

To H. H. Hunnewell, for very fine specimens,	$3 00
Mrs. G. L. Stevens,	1 00
Dr. W. F. Jackson,	2 00
Charles Robinson,	2 00
Charles C. Barre,	1 00
N. A. Youell,	2 00
James Cruickshanks,	1 00
Samuel Hartwell,	2 00
G. W. Stevens,	1 00
N. D. Harrington,	1 00
John Stetson,	1 00
John H. Dodge,	1 00
William P. Walker,	2 00

Gratuities for Plums, Grapes, etc.:—

To Amos Bates, for Plums,	1 00
Mrs. Draper, " "	1 00
J. McMahon, " "	1 00
J. L. D. Sullivan, for Nectarines,	2 00
E. Brock, " "	2 00
Miss Lucy Bowditch, for Figs,	2 00
Walker & Co., " "	1 00
John Falconer, for Black Hamburg Grapes,	2 00
E. S. Rand, Jr., for collection of Foreign Grapes,	2 00
Charles Garfield, for Grapes,	1 00
G. B. Cutter, for Rebecca Grapes,	2 00
Miss A. C. Wheeler, for Basket of Fruit,	2 00
Mrs. E. M. Gill, " " "	2 00

October 3.

Native Grapes.—For the best collection, not less than six varieties, six bunches of each, to Horace Eaton,	12 00
For the second best, to Mrs. E. M. Gill,	10 00
For the third best, to John B. Moore,	8 00
For the best dish of six bunches of any one variety, to John B. Moore, for Concord,	4 00
For the second best, to Charles Garfield, for Concord,	3 00
For the third best, to Horace Eaton, for Adirondac,	2 00

FOREIGN GRAPES.—For the best three varieties, two bunches of each, to E. W. Wood, . . . $5 00
For the second best, to B. G. Smith, . . . 4 00
For the best two bunches of one variety, to C. D. Kingman, for Black Hamburg, ... 3 00
For the second best, to Horace Partridge, for Victoria Hamburg, ... 3 00

Gratuities:—

To Horace Partridge, for Grapes and Peaches, . . 3 00
J. H. Fenno, " " " . . 2 00
Mrs. H. V. Draper, for Grapes and Pears, . . 1 00
Elisha Tower, for Grapes, ... 1 00
John B. Moore, for Seedling Grapes, . . . 3 00
Henry McLaughlin, for Pears, ... 2 00
C. E. Grant, " " 1 00
Mrs. E. M. Gill, " " 1 00
W. J. Griggs, " " 1 00
William C. Child, for Pears and Peaches, . . 3 00
G. M. Mellen, " " " . . . 2 00
J. E. Hodgkins, for Peaches, ... 1 00
Charles Stearns, " " 1 00
J. Falconer, " " 2 00
John B. Moore, " " 2 00

OCTOBER 10.

AUTUMN PEARS.—For the best ten varieties, to C. W. Chamberlain, ... 10 00
For the second best, to J. H. Fenno, . . . 8 00
For the third best, to John L. Bird, . . . 6 00
For the fourth best, to Hovey & Co., . . . 4 00
For the best five varieties, to Jesse Haley, . . . 6 00
For the second best, to T. M. Davis, . . . 5 00
For the third best, to Henry F. Coe, . . . 4 00
For the fourth best, to Amos Bates, . . . 3 00
For the best single dish, to T. M. Davis, for Urbaniste, 4 00
For the second best, to R W. Ames, for Beurre Superfin, ... 3 00
For the third best, to T. M. Davis, for Duchess, . 2 00

Autumn Apples.—For the best five varieties, to Asa Clement,	$6 00
For the second best, to J. H. Fenno,	5 00
For the third best, to Edwin Fletcher,	4 00
For the fourth best, to C. C. Shaw,	3 00
For the best single dish, to Asa Clement, for Gravenstein,	4 00
For the second best, to Henry F. Coe, for Gravenstein,	3 00
For the third best, to Asa Clement, for Mother,	2 00
Quinces.—For the best, to Charles Bird, for Orange,	3 00
For the second best, to J. E. M. Gilley, for Orange,	2 00
Gratuities:—.	
To Daniel Cross, for very fine Pears,	3 00
Robert Manning, for Pears,	2 00
E. A. Hall, " "	2 00
D. B. Flint, " "	2 00
H. M. Young, " "	1 00
John L. De Wolf, " "	4 00
W. P. Walker, " "	2 00
A. S. M'Intosh, " "	2 00
J. D. Hovey, " "	3 00
B. G. Smith, for Apples, Pears, and Quinces,	4 00
Horace Partridge, for Pears, and Grapes,	4 00
Japhet Sherman, " " "	1 00
Charles Garfield, " " "	1 00
C. E. Grant, for Grapes, Pears, and Quinces,	4 00
Mrs. E. M. Gill, for Grapes,	1 00
J. H. Fenno, for Peaches and Pears,	2 00
G. M. Mellen, " " "	2 00
W. G. Prescott, for Apples,	2 00
W. T. Hall, " "	2 00
Joseph Weston, for Strawberries,	2 00
J. E. M. Gilley, for collection of Fruit,	2 00

October 17.

Gratuities:—	
To Calvin Stewart, for Apples,	1 00
W. J. Griggs, for Pears,	2 00

To E. H. Hitchings, for Grapes, ... $1 00
J. Fisk Allen, " " 1 00
Robert Manning, for Peaches and Quinces, . . 2 00
G. M. Mellen, for collection of Fruit, . . . 2 00

OCTOBER 31.

Gratuities:—

To Marshall P. Wilder, for Pears, ... 2 00
C. E. Grant, " " 2 00

NOVEMBER 7.

WINTER PEARS.—For the best five varieties, to J. H. Fenno, ... 6 00
For the second best, to B. G. Smith, . . . 5 00
For the third best, to C. E. Grant, ... 4 00
For the fourth best, to Hovey & Co., . . . 3 00
For the best single dish, to J. H. Fenno, for Beurre d'Anjou, ... 4 00
For the second best, to A. S. M'Intosh, for Dana's Hovey, ... 3 00
For the third best, to Jesse Haley, for Lawrence, . 2 00
For the fourth best, to John L. Bird, for Winter Nelis, ... 1 00
WINTER APPLES.—For the best ten varieties, to Asa Clement, the French Plate, valued at . . . 12 00
For the second best, to F. & L. Clapp, the French Plate, valued at 9 00
For the best single dish, to John B. Moore, for Hubbardston, ... 4 00
For the second best, to Henry F. Coe, for King of Tompkins County, ... 3 00
For the third best, to C. C. Shaw, for Northern Spy, 2 00

Gratuities:—

To B. G. Smith, for collection of Fruit, . . . 3 00
Charles Bird, " " " . . . 2 00
A. S. M'Intosh, for " " . . . 1 00
C. C. Shaw, for Apples, ... 2 00

To James Cruickshanks, for Pears,	. . . .	$2 00
C. W. Chamberlain, " "	. . . . .	2 00
E. A. Hall, " "	. . . . .	2 00
Lewis Hall, " "	. . . . .	2 00
John C. Park, " "	. . . . .	1 00
Miss A. C. Wheeler, " "	. . . . .	1 00
T. S. Pettingill, " "	. . . . .	1 00
J. H. Fenno, " "	. . . . .	1 00
D. B. Flint, " "	. . . . .	1 00
Horace Partridge, " " and Grapes,	. .	3 00
Augustus Torrey, for Grapes,	. . . . .	1 00

NOVEMBER 14.

Gratuity:—

To A. McDermott, for very fine Mount Vernon Pears, . 2 00

DECEMBER 19.

Gratuity:—

To Joseph Bird, for Apples, ... 1 00

The following Silver Medals have been awarded: —

To the Fruit Growers' Association, and International Show Society, of Halifax, Nova Scotia, for a large collection of Apples, Pears, and Grapes.

John Falconer, for a fine collection of Nectarines and Peaches, orchard house culture.

Samuel N. Cox, of St. Joseph, Missouri, for a fine collection of Apples.

The amount awarded to each contributor is as follows:

C. H. Allen . .	$2	Amos Bates . .	$36
J. F. Allen . .	1	F. W. Belcher . .	5
F. L. Ames . .	12	Charles Bird . .	34
R. W. Ames . .	3	John L. Bird . .	41
E. Appleton . .	3	Joseph Bird . .	1
J. C. Appleton . .	2	Miss Lucy Bowditch .	2
C. M. Atkinson . .	9	E. Brock . . .	2
W. R. Austin . .	10	A. T. Brown . .	5
C. C. Barre . .	1	N. F. Bruce . .	2

Joseph Burnett	$4	Jesse Haley	$25
C. W. Chamberlain	30	E. A. Hall	5
W. C. Child	27	Lewis Hall	2
J. P. Childs	1	William T. Hall	18
C. E. Churchill	2	N. D. Harrington	1
F. & L. Clapp	13	Samuel Hartwell	22
J. Clark	5	A. Hatch	2
Asa Clement	67	Warren Heustis	53
James M. Codman	4	E. H. Hitchings	1
H. F. Coe	10	J. D. Hodgkins	1
W. A. Crafts	18	Dennis Hogan	2
Josiah Crosby	3	C. S. Holbrook	38
Daniel Cross	3	Hovey & Co.	50
C. F. Curtis	42	J. D. Hovey	3
G. S. Curtis	3	H. H. Hunnewell	3
G. B. Cutter	2	Dr. W. F. Jackson	2
B. B. Davis	16	W. S. Janvrin	13
T. M. Davis	32	Mrs. S. Joyce	2
J. L. DeWolf	20	C. D. Kingman	26
A. Dickinson	60	J. P. Langworthy	4
John H. Dodge	1	William Maloon	1
Mrs. Draper	5	J. K. Manning	1
Mrs. Dusseault	1	R. Manning	4
N. N. Dyer	1	Orra May	2
Horace Eaton	23	John McClure	5
Jacob Eaton	3	A. McDermott	2
James Eustis	12	H. McLaughlin	2
John Falconer	4	J. McMahon	2
A. W. Felton	6	G. M. Mellen	13
J. H. Fenno	94	A. S. M'Intosh	10
Edwin Fletcher	7	John B. Moore	195
D. B. Flint	5	Josiah Newhall	10
Mrs. B. Fobes	3	William F. Nichols	2
J. T. Foster	4	G. N. Noyes	11
Stiles Frost	1	James Nugent	11
Charles Garfield	54	C. Osgood	2
Mrs. E. M. Gill	28	John C. Park	33
J. E. M. Gilley	9	C. Parker	2
C. E. Grant	33	W. B. Parsons	1
W. J. Griggs	5	H. Partridge	20

S. S. Pettingill	$1	D. W. Stowers	$3
G. W. Pierce	3	W. C. Strong	2
W. P. Plimpton	5	J. L. D. Sullivan	7
Samuel Pratt	2	Edward Sumner	9
W. G. Prescott	11	A. Torrey	1
J. Preston	4	Elisha Tower	9
E. S. Rand, Jr.	2	R. W. Turner	7
C. E. Richardson	7	Walker & Co.	9
Charles Robinson	2	W. P. Walker	13
Walter Russell	3	Mrs. T. W. Ward	19
F. R. Shattuck	1	Joseph Weston	2
C. C. Shaw	23	Miss A. C. Wheeler	6
Japhet Sherman	1	N. B. White	12
M. H. Simpson	5	Marshall P. Wilder	12
Lewis Slack	2	G. W. Wilson	4
B. G. Smith	86	Henry W. Wilson	3
John Stetson	1	E. W. Wood	25
Charles Stevens	1	W. K. Wood	5
Mrs. G. L. Stevens	1	J. H. Woodford	7
G. M. Stevens	1	N. A. Youell	2
Calvin Stewart	1	H. M. Young	1
Phineas Stone	2	Thomas Young, Jr.	3

Amount of Appropriation		$2,000
Prizes awarded	$1,290	
Gratuities awarded	467	1,757
Balance not awarded		$243

REPORT

OF THE

COMMITTEE ON VEGETABLES,

FOR THE YEAR 1874.

By CHARLES N. BRACKETT, Chairman.

In presenting their report for the year, your committee have again to express their regret that the exhibitions of forced vegetables usually made during the early part of the winter and spring months, have been so few and far between. Occasionally, however, we were favored by small, but most excellent displays of choice specimens from the hot-bed and forcing house, which at this season are always of interest, reminding one of the good time coming.

The first exhibition of the season was made January 17, by James Comley, who exhibited a dish of very fine, well grown Mushrooms, and continued to show superior specimens of this delicate vegetable, from this date to April 25. Commencing February 7, Mr. Comley also exhibited superb samples of forced Rhubarb from time to time, which for size, color, and beauty of growth, we have never seen excelled at this season. January 24, C. M. Atkinson placed upon the table remarkably fine specimens of Brussells Sprouts; they are quite hardy, easily grown, and deserve more general cultivation. February 1, O. C. Gibbs exhibited a very fine sample of Cucumbers from his forcing house, (the first of the season) and Walter Russell excellent specimens of Celery. February 28, we had Tennisball Lettuce from George F. Stone, and Josiah Crosby; March 14, Mushrooms from James O'Brien; March 21, White Spine Cucumbers from George H. Scott, and Lettuce from George W. Pierce; and March 28, Tomatoes from

Mrs. E. M. Gill. April 25, Marshall P. Wilder exhibited specimens of his new hybrid Cucumber, a cross of Highland Mary with Long Green, which were very fine, and gave promise that the variety will be of value; we had also later in the season very fine samples of Sion House Cucumbers, and forced Tomatoes from the same contributor.

The show of vegetables at the opening exhibition was considered a very fine one; the same might be said of the exhibition which occurred July 2d, the time of holding the Strawberry Show. Taken as a whole, our exhibition season in this department may be considered a successful one. A prominent and interesting feature at the Annual Exhibition consisted of the splendid collections of new seedling Potatoes shown by B. K. Bliss & Sons, of New York, and E. S. Brownell, of Essex Junction, Vermont, the collections comprising several distinct varieties never before on exhibition here, and considered by the originators the very choicest selections from many hundred seedlings. As some of these seedlings have been entered for the Whitcomb Prize, your committee have endeavored to collect all the information in their power with regard to their origin, etc., for the purpose of placing the same on record for future reference, should occasion require.

The following have been entered for the Whitcomb Prize, by B. K. Bliss & Sons, and are thus described by the originator:

Snowflake.—"Raised by C. G. Pringle, of Vermont, and first sent out to the public in the spring of 1874. It has been tested the past season, both in this country and in Europe. The superior qualities claimed for it by the originator when first offered, have in every instance, so far as heard from, been confirmed. It is one of the earliest varieties, ripening about the same time as the Early Rose. Tubers of a good medium and uniform size; form elongated oval, exceedingly symmetrical, and remarkably uniform; eyes few, entirely flat on the base and body of the tuber, and but slightly and sharply depressed near the seed end; skin white, with a russetty tinge. Flesh fine grained, snow white when boiled, and of a lightness and porosity almost approaching a snowflake. In quality it is not surpassed; its mealiness, its pure delicate flavor, and the evenness with which it cooks through, have never been eclipsed by any potato. The tubers have attained the full development of their quality as soon as they are fit to dig, and do not lose it during winter, samples keeping well, and in good condition

till the first of June. The vines are of medium height, stout and vigorous; leaves medium, and of dark color. The tubers grow compactly clustered around the base of the stalks, an important consideration in digging the crop. This variety has been tested the past season on widely varying soils, and has in every case given the same favorable results, producing a yield of from 300 to 400 bushels per acre."

Alpha.—"Also raised by Mr. Pringle, the originator of the Snowflake, from seed borne on Early Rose, and impregnated by pollen of Sebec. It is a very early dwarf variety adapted to garden culture and to forcing under glass: fit for the table ten or fifteen days before the Early Rose. Tubers of medium size, oblong somewhat flattened, with eyes but slightly depressed; color a clear white with the slightest tinge of red about the eyes; flesh very white, fine grained, dry and firm, and possessed of a decided and excellent flavor. Stalks short and close jointed, seldom exceeding a foot in height; leaf broad, light green and shining above; tubers clustered about the base of the stalk; quality first rate in every respect. A trial of these two varieties the past season in England has proved highly satisfactory, a first class certificate of merit having been awarded each by the Royal Horticultural Society of London."

E. S. Brownell entered the following varieties, — Eureka, Brownell's Beauty, and Early Nonsuch.

Eureka was raised by Mr. Brownell in 1871. "This seedling resulted from a seed-ball grown on an Excelsior potato vine; blossom fertilized with pollen from the White Peachblow; vines of strong and vigorous growth; tubers of a good medium and uniform size; shape elongated oval somewhat flattened, very symmetrical and uniformly handsome in appearance; eyes few, exceedingly small, and very nearly level and flat; skin white and fair; season second early, medium or between very early and medium late. It is one of the most productive in cultivation, besides being an excellent keeper. Its flesh is exceedingly fine-grained, white, and when boiled or baked, mealy and of excellent flavor, cooking through uniformly without any fault at the centre. It is considered an acquisition among the white varieties and well worthy of further trial in different localities."

Brownell's Beauty.—Another of Mr. Brownell's seedlings, first sent out in the Spring of 1873. "We know of no variety which

retains its good qualities for the entire year, as this has done. Specimens of the crops of 1873 and 1874 were exhibited side by side at the Annual Exhibition, those of 1873 having been kept in an ordinary cellar without any especial care, being equally fair and sound as those of this year's growth. Samples were sent in 1873 to the gardens of the Royal Horticultural Society of London, where they were awarded a first class certificate, and the variety has also received many premiums at various agricultural fairs in this country. Size, medium to large, growing very fair and smooth. Eyes few and small, nearly even with the surface; shape oval, somewhat flattened; skin reddish, or a deep flesh color; flesh white, fine-grained, and very delicate. For the table they cook, either by baking or boiling, equal to the very best, and with ordinary boiling they cook through to the centre evenly, dry and mealy; flavor unexceptionable. Vines of medium growth; foliage deep green, and very healthy in all respects. The tubers grow compactly in the hill and are easily dug, ripening in about three months from the time of planting, though suitable for cooking about two weeks later than the Early Rose, with the same culture. They are very productive, with but few small tubers. Its beautiful appearance, fine quality, extraordinary productiveness, and remarkable keeping qualities will render it a valuable variety for the market."

Early Nonsuch. — Originated from "the same seed ball as Brownell's Beauty. Its season of ripening is but a few days later than the Early Rose. Its blossoms are light purple, the vines vigorous, very bushy, and healthy; very productive; shape somewhat cylindrical, flattened and squarely cut at the stem end; skin pale russet, somewhat rough; eyes few, light pink, and nearly flat; flesh white, mealy, and of the best quality. Its fine appearance, large and uniform size, great productiveness, and excellent quality, cannot fail to make this new seedling a most valuable market potato."

Your Committee have awarded to C. G. Pringle and E. S. Brownell, each the Society's Silver Medal, for their efforts in originating and introducing new Seedling Potatoes, and the interesting exhibition they have made of them.

At the Annual Exhibition, B. K. Bliss & Sons also exhibited a new Tomato called the Conqueror. It originated with Mr. Pringle, of Vermont, in 1869, and was obtained by crossing the Keyes with

pollen of the Gen. Grant. It is claimed by the originator as the earliest and most productive variety in cultivation, and is described by him as follows:

"The fruit of the Conqueror does not remain green for a long time after it has reached its full size, but begins at once to ripen; in this manner it attains an earliness of maturity which has been some two weeks in advance of the General Grant, and considerably in advance of any of the popular sorts, which have been heretofore considered the earliest, by the side of which it has been tested. This earliness ensures the ripening of the entire crop; which fact, taken in connection with its remarkable productiveness, makes its yield enormous. In the field where our stock of seed was grown the past season, the product was at the rate of over 1,000 *bushels per acre*. The habit of the vine is moderately compact, so that a space of three by four feet affords it ample room. The leaf resembles that of the pollen parent, General Grant, rather than that of the Keyes, on which the seed was borne, and shows much of the curl peculiar to early varieties. The fruit is borne in clusters of eight to twelve, which ripen very nearly at the same time. It is of good size, is three to four inches in diameter, round and flattened in outline, remarkably uniform in shape and size, and unusually free from irregular or ribbed and crumpled specimens. Its color is a deep red minutely dusted with gold. Its flesh, from which the skin parts readily, is solid, of uniform excellence throughout, and possessed of rich, mild flavor. It ripens well up to the stem and is exempt from cracking. Testimonials from gentlemen well known in the agricultural community confirm the statement of the originator."

We are also indebted to the Messrs. Bliss for a new variety of Sweet Corn called the Triumph. According to their description, "it was originated by Daniel C. Voorhees of New Jersey, and is the result of ten years of careful cultivation, and the selection of seed stock, with the view of developing the following points of excellence, which the originator claims are now combined in this variety, viz., sweetness, earliness, productiveness, size of ear, small cob, only a medium sized stalk, and very white appearance of the corn when cooked." This corn is very highly recommended by prominent and reliable persons who have given it a trial, as a very desirable table corn.

A new seedling Potato was also exhibited by Samuel Wheeler,

of Berlin, Mass., a cross between the Early Rose and White Chenango, raised from a seed ball in 1871, said to be a half early variety, and to yield well.

Your Committee are pleased to note a large increase during the past year in the number of contributors to this department, the whole number having been seventy-five against fifty for the previous year. The annexed list of awards shows the amount of prizes and gratuities awarded by your committee during the year.

All of which is respectfully submitted.

C. N. Brackett,
Geo. W. Pierce,
Josiah Crosby,
Walter Russell,
George Hill,
John Fillebrown,
Anthony Hatch,

Committee on Vegetables.

PRIZES AND GRATUITIES FOR VEGETABLES

December 6, 1873.

Gratuity:—

To James Comley, for Mushrooms, ... $3 00

January 17, 1874.

Gratuity:—

To James Comley, for Mushrooms, ... 2 00

January 24.

Gratuity:—

To C. M. Atkinson, for Brussells Sprouts, ... 2 00

February 1.

Gratuity:—

To O. C. Gibbs, for collection of Cucumbers, ... 4 00

February 7.

Gratuities:—

To James Comley, for Rhubarb (very fine), ... 4 00

Walter Russell, for Celery, ... 4 00

February 14.

Gratuity:—

To James Comley, for Rhubarb, ... 3 00

February 21.

Gratuities:—

To James Comley, for Rhubarb and Mushrooms, . . . 5 00

Richard Oldrieve, for Rhubarb, ... 1 00

William Ellery, for Potatoes, ... 1 00

February 28.

Gratuity:—

To E. W. Wood, for Rhubarb, ... 3 00

MARCH 7.

Gratuities:—

To James Comley for Rhubarb,	$2 00
" " " Mushrooms,	2 00
G. F. Stone, for Tennisball Lettuce,	4 00
Josiah Crosby, for " "	2 00
C. M. Atkinson, for Potatoes,	1 00

MARCH 14.

Gratuity:—

To James O'Brien, for Mushrooms,	2 00

MARCH 21.

Gratuities:—

To James Comley, for Mushrooms,	3 00
George H. Scott, for White Spine Cucumbers,	4 00
George W. Pierce, for Lettuce,	4 00

MARCH 28.

Gratuity:—

To Mrs. E. M. Gill, for Tomatoes,	1 00

APRIL 4.

Gratuities:—

To James Comley, for Mushrooms,	4 00
George F. Stone, for Lettuce,	4 00
C. N. Brackett, " "	4 00

APRIL 11.

Gratuity:—

To C. N. Brackett, for Lettuce,	3 00

APRIL 18.

Gratuities:—

To James Comley, for Mushrooms,	3 00
C. N. Brackett, for Tennisball Lettuce,	3 00
Marshall P. Wilder, for Hybrid Cucumbers,	3 00

AZALEA EXHIBITION.

April 25.

Cucumbers.—For the best pair, to C. W. Chamberlain,	$4 00
Lettuce.—For the best four heads, (Tennisball) to C. N. Brackett,	4 00
For the second best, to G. W. Pierce,	3 00
Radishes.—For the best four bunches, to Josiah Crosby,	4 00
Mushrooms.—For the best dish of twelve specimens to James Comley,	5 00

Gratuities:—

To James Comley, for Mushrooms,	4 00
Marshall P. Wilder, for Hybrid Cucumbers,	3 00

May 2.

Gratuities:—

To W. D. Philbrick, for Lettuce,	3 00
Marshall P. Wilder, for Cucumbers,	3 00

May 16.

Gratuities:—

To Marshall P. Wilder, for Sion House Cucumbers,	3 00
W. K. Wood, for Lettuce (fine),	3 00

May 23.

Gratuities:—

To Marshall P. Wilder, for Sion House Cucumbers,	2 00
J. B. Moore, for Asparagus (fine),	4 00
G. M. Mellen, for Rhubarb,	1 00
W. K. Wood, for Lettuce,	2 00

May 30.

Gratuities:—

To J. B. Moore, for Asparagus,	3 00
W. H. Bell, " " (very fine),	4 00

OPENING EXHIBITION.

June 6.

Asparagus.—For the second best four bunches, twelve stalks each, to J. H. Bell, ... $3 00
For the third best, to Samuel Hartwell, . . . 2 00
Cucumbers.—For the best pair, grown under glass, to George W. Pierce, ... 4 00
For the second best, to C. W. Chamberlain, . . 3 00
For the third best, to Josiah Crosby, . . . 2 00
Rhubarb.—For the best twelve stalks, to George W. Pierce, ... 4 00
For the second best, to G. M. Mellen, . . . 3 00
For the third best, to Samuel Hartwell, . . . 2 00
Radish, Long Scarlet.—For the best four bunches, to Josiah Crosby, ... 4 00
Lettuce.—For the best four heads, to George W. Pierce, 4 00
For the second best, to " " " 3 00
For the third best, to " " " 2 00
Lettuce—Boston Curled.—For the best four heads, to George W. Pierce, ... 4 00
For the second best, to Josiah Crosby, . . . 3 00

Gratuities: —

To W. S. Rice, for Asparagus, ... 2 00
Josiah Crosby, for Carrots, ... 2 00
Marshall P. Wilder, for Sion House Cucumbers, . 4 00
" " " " Tomatoes, ... 2 00
James Comley, " " 3 00
" " " Mushrooms, . . . 2 00
C. M. Atkinson, " Lettuce, ... 2 00
J. H. Bell, " Parsley, ... 1 00
J. B. Moore, " Asparagus, ... 3 00

June 13.

Gratuities: —

To George W. Pierce, for collection of Lettuce, . . 2 00
" " " " Egyptian Beets, . . . 2 00
James Comley, " collection 2 00

June 20.

Gratuities: —

To Josiah Crosby, for Cucumbers (fine), . . . $3 00

June 24.

Gratuities:—

To W. G. Prescott, for Dan O'Rourke Peas, . . . 3 00
Josiah Crosby, " Hill's Early Peas, . . . 2 00
W. C. Child, " Carter's First Crop Peas, . . 1 00
C. D. Kingman, " Early Rose Potatoes, . . 3 00
Josiah Crosby, " collection, ... 6 00
" " " Cucumbers, ... 3 00
" " " Onions, ... 2 00
C. W. Chamberlain, for collection, ... 5 00
C. M. Atkinson, for Lettuce, ... 3 00
G. W. Pierce, " collection, ... 5 00
" " " " Cucumbers, ... 3 00
" " " " Egyptian Beets, . . . 3 00
Marshall P. Wilder, for Hybrid Cucumbers, . . 3 00

June 27.

Gratuity:—

To Walter Russell, for collection, ... 5 00

July 2.

Peas.—For the best peck, to Josiah Crosby, for Hill's Early, ... 4 00
For the second best, to Charles Garfield, for Early Kentish, ... 3 00
For the third best, to Charles Garfield, for Dan O'Rourke, ... 2 00
Beets.—For the best summer, Turnip-rooted, twelve specimens, to Josiah Crosby, ... 4 00
For the second best, to C. W. Chamberlain, . . 3 00
For the third best, to John Fillebrown, . . . 2 00
For the best Egyptian, twelve specimens, to G. W. Pierce, ... 4 00

For the second best, to J. Fillebrown,	$3 00
For the third best, to J. Crosby,	2 00
CUCUMBERS.—For the best pair (White Spine), to J. Fillebrown,	4 00
For the second best, to Josiah Crosby,	3 00
For the third best, to C. W. Chamberlain,	2 00
LETTUCE.—For the best four heads, any variety, to G. W. Pierce,	4 00
For the second best, to G. W. Pierce,	3 00
For the third best, to " " "	2 00
CARROTS, SHORT SCARLET.—For the best twelve specimens, to Josiah Crosby,	4 00
ONIONS.—For the best twelve specimens, to Josiah Crosby,	4 00
For the second best, to John Fillebrown,	3 00
For the third best, to C. W. Chamberlain,	2 00
CABBAGES.—For the best four, to John Fillebrown, for Wyman,	4 00
For the second best, to John Fillebrown, for Wakefield,	3 00
POTATOES.—For the best peck, to C. W. Chamberlain, for Early Rose,	4 00
Gratuities:—	
To W. C Child, for collection of Peas,	3 00
Josiah Crosby, for Tailby's Hybrid Cucumbers,	2 00
John Fillebrown, for Cucumbers,	2 00
D. B. Flint, " "	1 00

JULY 11.

CRANBERRY BEANS.—For the best peck, to Walter Russell,	4 00
SQUASHES.—For the best Long Warted Summer. four specimens, to Walter Russell,	3 00
For the second best, to John Fillebrown,	2 00
PEAS.—For the best peck, any variety, to Charles Garfield, for Advancer,	4 00
For the second best, to W. G. Prescott, for Champion,	3 00
For the third best, to W. C. Child, for Advancer,	2 00
ONIONS.—For the best twelve specimens, to Josiah Crosby,	4 00
For the second best, to C. W. Chamberlain,	3 00

Potatoes.—For the best peck, any variety, to C. W. Chamberlain, ... $4 00

Gratuities:—

To Walter Russell, for collection, ... 5 00
" " " Lettuce, ... 2 00
" " " Cabbages (Wyman), . . . 3 00
C. D. Kingman, for Wax Beans (fine), . . . 3 00
Miss A. C. Wheeler, for String Beans, . . . 1 00
Mrs. E. M. Gill, " " . . . 1 00
W. C. Child, " " . . . 1 00
G. M. Mellen, for Peas, ... 1 00
Josiah Crosby, for collection, ... 4 00
John Fillebrown, for " 5 00
" " " Wyman Cabbage, . . . 3 00

July 18.

Turnips.—For the best Flat, twelve specimens, to John Fillebrown, ... 4 00

Gratuities:—

To John Fillebrown, for Squashes, ... 2 00
" " " Cabbages, ... 3 00
" " " collection, ... 5 00
C. M. Atkinson, " " of Peas, . . . 3 00
Walter Russell, " collection, ... 5 00
" " " Carrots, ... 2 00
" " " Wyman Cabbage, . . . 3 00
W. C. Child, " Peas, ... 1 00
W. K. Wood, " Wax Beans, ... 2 00
C. D. Kingman, " " 3 00

July 25.

Squashes, Marrow.—For the best four, to Josiah Crosby 4 00
Cabbages.—For the best four, Drumhead, to John Fillebrown, ... 4 00
Beans.—For the best peck, Dwarf Horticultural, to Miss A. C. Wheeler, ... 4 00

Gratuities:—

To John Fillebrown, for collection, ... $4 00
Josiah Crosby, " Rose Potatoes, ... 2 00
C. D. Kingman, " Tomatoes, ... 1 00
G. A. Law, " Peas, ... 1 00

AUGUST 1.

TOMATOES.—For the best twelve specimens, to Walter Russell, for Boston Market, ... 4 00
For the second best, to C. D. Kingman, for Hathaway's Excelsior, ... 3 00
For the third best, to C. D. Kingman, for Maupay's Superior, ... 2 00
CORN.—For the best sweet, twelve ears, to W. C. Child. 4 00

Gratuities:—

To Miss A. C. Wheeler, for Beans, ... 1 00
W. K. Wood, " " 1 00
W. C. Child, " Peas, ... 1 00
Walter Russell, for Brunswick and Wyman Cabbage, 4 00
" " " collection, ... 4 00
Geo. M. Mellen, " " 4 00

AUGUST 8.

SWEET CORN.—For the best twelve ears, Early Crosby, to Walter Russell, ... 4 00
For the second best, to Josiah Crosby, . . . 3 00
For the third best, to J. C. Park, ... 2 00
For the best twelve ears, Early Concord, to W. C. Child, 4 00
SQUASHES, MARROW.—For the best four, to Josiah Crosby, 4 00
TOMATOES.—For the best twelve specimens, General Grant, to C. N. Brackett, ... 4 00
For the second best, to Charles Garfield, . . 3 00
For the best twelve specimens, Boston Market, to Walter Russell, ... 4 00

Gratuities:—

To Josiah Crosby, for Egg Plant, ... 2 00
" " " collection, ... 5 00
George M. Mellen, for collection, ... 4 00
John B. Moore, for Tomatoes, ... 3 00
C. D. Kingman, " " 2 00

August 15.

Egg Plant.—For the best Black Pekin, four specimens, to Josiah Crosby, ... $4 00

Tomatoes.—For the best twelve, any variety, to J. B. Moore, for Gen. Grant, ... 4 00

For the second best, to Walter Russell, for Boston Market, ... 3 00

For the third best, to G. W. Mellen, for Boston Market, ... 2 00

Gratuities:—

To Josiah Crosby, for Squashes, ... 2 00
" " " Green Flesh Melons, . . . 2 00
J. B. Moore, " Cauliflowers, ... 3 00
" " " " Cucumber, ... 2 00
Peter Fottler, " Brunswick Cabbage, . . . 1 00
B. G. Smith, " Sieva Beans, ... 2 00
J. S. Richards, " Burr's Corn, ... 1 00
J. Tailby, " Brownell's Beauty Potato, . . 1 00
G. M. Mellen, " collection, ... 3 00
W. C. Child, " " 3 00
Walter Russell " " 3 00
C. D. Kingman, " Tomatoes, ... 1 00
Charles Garfield, " " 1 00

August 22.

Melons.—For the best Green Flesh, of any variety, four specimens, to Josiah Crosby, ... 4 00

For the second best, to Walter Russell, . . . 3 00

Egg Plants.—For the best Large Purple, four specimens, to Josiah Crosby, ... 4 00

For the second best, to Walter Russell, . . . 3 00

For the best Black Pekin, four specimens, to Josiah Crosby, ... 4 00

Gratuities:—

To Joseph Tailby, for Hybrid Cucumbers, . . . 1 00
B. G. Smith, " Lima Beans, ... 2 00
Charles Garfield, for collection of Tomatoes, . . 1 00
G. M. Mellen, " " " " . . 3 00
Walter Russell, " " 4 00
John B. Moore, " Tomatoes, ... 1 00
Mrs. E. M. Gill, " " 1 00

AUGUST 29.

POTATOES.—For the best peck, any variety, to J. B. Moore, for Extra Early Vermont,	$4 00
For the second best, to J. Tailby, for Brownell's Beauty,	3 00
For the third best, to J. B. Moore, for Snowflake,	2 00
BEANS.—For the best two quarts of Small Lima or Sieva, to B. G. Smith,	4 00
For the second best, to Charles Garfield,	3 00
For the third best, to Charles Stearns,	2 00

Gratuities:—

To J. B. Moore, for collection,	3 00
W. C. Child, " "	2 00
Walter Russell, for "	2 00
G. M. Mellen, " "	2 00
James Comley, for Egg Plant,	1 00
Charles Garfield, for Potatoes,	1 00
George W. Pierce, for Tomatoes,	1 00

SEPTEMBER 5.

BEANS.—For the best two quarts of Large Lima, to B. G. Smith,	4 00
For the second best, to W. C. Child,	3 00
For the third best, to Mrs. E. M. Gill,	2 00
CELERY.—For the best four roots, to Josiah Crosby,	4 00
PEPPERS.—For the best half-peck, to " "	4 00
For the second best, to W. C. Child,	3 00

Gratuities:—

To Charles Garfield, for collection,	2 00
G. M. Mellen, " "	2 00
J. Tailby, " "	1 00
C. M. Atkinson, " Melons,	2 00
J. H. Woodford, " Wax Beans,	1 00
George Craft, " Burr's Corn,	1 00
George N. Noyes, for Sweet Corn,	1 00

ANNUAL EXHIBITION.

SEPTEMBER 15, 16, 17, AND 18.

Special Prize, open to all.

CAULIFLOWERS.—For the best four heads, to John B. Moore, ... $10 00
For the second best, to C. M. Atkinson, . . . 5 00

BEETS.—For the best Turnip-rooted, twelve specimens, to Walter Russell, ... 4 00
For the second best, to S. A. Merrill, . . . 3 00
For the third best, to John Fillebrown, . . . 2 00
For the best Long Blood, twelve specimens, to Josiah Crosby, ... 4 00
For the second best, to Walter Russell, . . . 3 00
For the third best, to George W. Pierce, . . 2 00

CARROTS.—For the best Early Horn, twelve specimens, to J. Crosby, ... 4 00
For the second best, to George W. Pierce, . . 3 00
For the third best, to Walter Russell, . . . 2 00
For the best Long Orange, twelve specimens, to J. Crosby, ... 4 00
For the second best, to Walter Russell, . . . 3 00
For the third best, to John Fillebrown, . . . 2 00
For the best Intermediate, twelve specimens, to Walter Russell, ... 4 00
For the second best, to Josiah Crosby, . . . 3 00
For the third best, to John Fillebrown, . . . 2 00

CORN.—For the best Sweet, twelve specimens, to S. A. Merrill, ... 4 00
For the second best, to Samuel Hartwell, . . 3 00
For the third best, to John B. Moore, . . . 2 00
For the best twelve specimens, Burr's, to George Craft 4 00
For the second best, to Samuel Hartwell, . . 3 00
For the third best, to C. E. Grant, ... 2 00
For the best Yellow or Field, twenty-five ears, traced, to Mrs. Mary T. Goddard, ... 4 00
For the second best, to N. F. Bruce, . . . 3 00

CRANBERRIES.—For the best half-peck, to William G. Prescott, ... $4 00
For the second best, to Edward Sumner, . . 3 00
For the third best, to C. N. Brackett, . . . 2 00
MELONS.—For the best Green Flesh, three specimens, to G. W. Pierce, ... 4 00
For the second best, to Walter Russell, . . . 3 00
For the third best, to Samuel Pratt, . . . 2 00
BEANS.—For the best two quarts, Large Lima, to B. G. Smith, ... 4 00
For the second best, to Charles W. Shepard, . . 3 00
For the third best, to George W. Wilson, . . 2 00
PARSNIPS.—For the best Long, twelve specimens, to John Fillebrown, ... 4 00
For the second best, to Walter Russell, . . . 3 00
For the third best, to William A. Crafts, . . 2 00
POTATOES.—For the best four varieties, one peck each, to S. A. Merrill, ... 6 00
For the second best, to J. B. Moore, . . . 5 00
For the third best, to E. W. Wood, . . . 4 00
For the best peck of Jackson, to Mrs. M. T. Goddard, 3 00
" " Garnet Chili, " " " 3 00
" " Early Rose, " " " 3 00
" " Bresee's Prolific (or No. 2), to Mrs. M. T. Goddard, ... 3 00
For the best peck, of Snow Flake (or No. 6), to Mrs. M. T. Goddard, ... 3 00
For the best peck of any other variety, to Joseph Tailby, for Brownell's Beauty, ... 3 00
SALSIFY.—For the best twelve specimens, to J. L. De Wolf, ... 4 00
For the second best, to W. H. Crafts, . . . 3 00
For the third best, to G. W. Pierce, . . . 2 00
SQUASHES.—For the best Marrow, four specimens, to John Fillebrown, ... 4 00
For the second best, to George Hill, . . . 3 00
For the third best, to Walter Russell, . . . 2 00
For the best Hubbard, four specimens, to J. J. H. Gregory, ... 4 00
For the second best, to George Hill, . . . 3 00
For the third best, to S. A Merrill, ... 2 00

For the best Turban, four specimens, to J. J. H. Gregory	$4 00
For the second best, to Franklin Alley, . . .	3 00
For the third best, to S. A. Merrill, . .	2 00
For the best Canada, four specimens, to Samuel Pratt,	4 00
For the second best, to Josiah Newhall, . . .	3 00
For the third best, to S. A. Merrill, . . .	2 00
Turnips.—For the best twelve Swedish, to Mrs. M. T. Goddard, ...	3 00
For the second best, to Samuel Hartwell, . .	2 00
Celery.—For the best four roots, to John Fillebrown, .	4 00
For the second best, to Josiah Crosby, . . .	3 00
For the third best, to Walter Russell, . . .	2 00
Tomatoes.—For the best three varieties, twelve specimens each, to C. N. Brackett, ...	5 00
For the second best, to G. W. Pierce, . . .	4 00
For the third best, to Walter Russell, . . .	3 00
For the best single dish, twelve specimens, of Gen. Grant, to Mrs. M. T. Goddard, ...	3 00
For the best Boston Market, to G. W. Pierce, . .	3 00
For the best Arlington, to C. N. Brackett, . . .	3 00
For the best Canada Victor, to J. J. H. Gregory, .	3 00
For the best single dish, twelve specimens, of any other sort, to J. J. H. Gregory, for Hathaway's Excelsior,	3 00
For the best single dish, twenty-four specimens, any variety, to G. W. Pierce, ...	4 00
For the second best, to G. M. Mellen, . . .	3 00
For the third best, to Walter Russell, . . .	2 00
Okra.—For the best twenty-four specimens, to C. M. Atkinson, ...	4 00
Martynias.—For the best twenty-four specimens, to G. W. Pierce, ...	4 00
For the second best, to N. F. Bruce, . . .	3 00
For the third best, to Hovey & Co., . . .	2 00
Cauliflowers.—For the best four specimens, to J. B. Moore, ...	4 00
For the second best, to George Hill, . . .	3 00
For the third best, to S. A. Merrill, . . .	2 00
Cabbages.—For the best Drumhead, three specimens, to Franklin Alley, ...	4 00
For the second best, to S. A. Merrill, . . .	3 00
For the third best, to Mrs. M. T. Goddard, . .	2 00

For the best Red Cabbage, three heads, to S. A. Merrill,	$4 00
For the second best, to Samuel Hartwell,	3 00
For the third best, to Mrs. M. T. Goddard,	2 00
For the best Savoy, three heads, to S. A. Merrill,	4 00
For the second best, to Mrs. M. T. Goddard,	3 00
For the third best, to Samuel Hartwell,	2 00
Horse Radish.—For the best six roots, to John Fillebrown,	3 00
For the second best, to Walter Russell,	2 00
Peppers.—For the best peck, to George Hill,	4 00
For the second best, to Anthony Hatch,	3 00
For the third best, to C. N. Brackett,	2 00
Onions.—For the best peck, of any one variety, to George Hill,	4 00
For the second best, to Anthony Hatch,	3 00
For the third best, to Franklin Alley,	2 00
For the best three varieties, one peck each, to George Hill,	5 00
For the second best, to Walter Russell,	4 00
For the third best, to Josiah Crosby,	3 00
Egg Plants.—For the best Round Purple, four specimens, to George Hill,	4 00
For the second best, to George W. Pierce,	3 00
For the third best, to Walter Russell,	2 00
For the best Black Pekin, four specimens, to C. N. Brackett,	4 00
For the second best, to J. Crosby,	3 00
For the third best, to George Hill,	2 00
Pumpkins.—For the best four specimens, not less than twenty pounds each, to Anthony Hatch,	3 00
For the second best, to S. A. Merrill,	2 00

Gratuities:—

To George N. Noyes, for collection,	4 00
John L. De Wolf, " "	5 00
George W. Pierce, " "	5 00
Joseph Fenno, " "	3 00
William A. Crafts, " "	3 00
G. M. Mellen, " "	3 00

To Dennis Hogan,	for collection,	$5 00
Franklin Alley,	" "	4 00
S. A. Merrill,	" "	5 00
Washburn & Co.,	" "	2 00
C. M. Atkinson,	" "	3 00
Charles Garfield,	" "	3 00
Edward Sumner,	" "	2 00
F. Trabandt,	" "	5 00
J. J. H. Gregory,	" "	5 00
Hovey & Co.,	" "	3 00
Samuel Hartwell,	" "	2 00
W. C. Child,	" "	3 00
George A. Law,	" "	3 00
Josiah Crosby,	" "	3 00
Anthony Hatch,	" "	2 00
John Fillebrown,	" "	5 00
N. F. Bruce,	" "	3 00
H. B. Parker,	" "	2 00
Edward Sumner,	" "	2 00
A. T. Brown,	" "	2 00
" "	" " of Potatoes,	5 00
D. T. Curtis,	" " of Grasses and Grain,	3 00
Samuel Wheeler,	" Seedling Potato,	1 00
Francis Kendall,	" Moore's Corn,	1 00
Joseph Swan,	" Drumhead Cabbages,	4 00
George Craft,	" Potatoes,	1 00
B. K. Bliss & Sons,	" Tomatoes (Conqueror, new),	2 00
T. R. Shewell,	" "	1 00
J. H. Woodford,	" Wax Beans,	1 00
J. Tailby,	" Cucumbers,	1 00
Samuel Pratt,	" Marrow Squashes,	2 00
Wm. Vanderverd,	" Seedling Potato,	1 00
Walter Russell,	" Celery,	2 00
George W. Pierce,	" Sunflower,	2 00
George Craft,	" Squash,	1 00

OCTOBER 10.

CAULIFLOWERS.—For the best four heads, to George W. Pierce, ... 4 00

CELERY.—For the best four roots, to Josiah Crosby, . 4 00

For the second best, to C. W. Chamberlain, . . 3 00

Cabbages.—For the best Savoy, three heads, to Walter Russell,	$4 00
Salsify.—For the best twelve specimens, to George W. Pierce,	4 00
For the second best, to Josiah Crosby,	3 00
Horse Radish.—For the best six roots, to Walter Russell	4 00

Gratuities:—

To George N. Noyes, for Corn,	1 00
George M. Mellen, " Tomatoes,	1 00
Mrs. E. M. Gill, " Lima Beans,	1 00

November 7.

Gratuities:—

To A. S. McIntosh, for Artichokes,	1 00
J. H. Fenno, " Sweet Potatoes,	1 00

November 21.

Gratuity:—

To Hovey & Co., for Mushrooms,	3 00

December 10.

Gratuity:—

To Hovey & Co., for Mushrooms,	2 00

The following awards of Medals were also made:—

To C. G. Pringle, of Vermont, for collection of new Seedling Potatoes, the Society's Silver Medal.

To E. S. Brownell, Essex Junction, Vermont, for collection of Seedling Potatoes, the Society's Silver Medal.

The amount awarded to each contributor is as follows: —

Franklin Alley	$13	George Craft	$7
C. M. Atkinson	28	William A. Crafts	8
J. H. Bell	8	Josiah Crosby	146
B. K. Bliss & Sons	2	Daniel T. Curtis	3
C. N. Brackett	34	J. L. DeWolf	9
A. T. Brown	7	William Ellery	1
N. F. Bruce	9	J. H. Fenno	4
C. W. Chamberlain	33	John Fillebrown	79
W. C. Child	31	D. B. Flint	1
James Comley	48	Peter Fottler	1

Charles Garfield	$23	George W. Pierce	$101
O. C. Gibbs	4	Samuel Pratt	8
Mrs. E. M. Gill	6	W. G. Prescott	10
Mrs. Mary T. Goddard	32	W. S. Rice	2
C. E. Grant	2	J. S. Richards	1
James J. H. Gregory	19	Walter Russell	123
Samuel Hartwell	20	George H. Scott	4
Anthony Hatch	11	Charles W. Shepard	3
George Hill	28	T. R. Shewell	1
Dennis Hogan	5	Benjamin G. Smith	16
Hovey & Co.	10	Charles Stearns	2
Francis Kendall	1	George F. Stone	8
C. D. Kingman	18	Edward Sumner	5
G. A. Law	4	Joseph Swan	4
G. M. Mellen	31	Joseph Tailby	10
S. A. Merrill	39	F. Trabandt	5
A. S. M'Intosh	1	William Vanderverd	1
John B. Moore	53	Washburn & Co.	2
Josiah Newhall	3	Miss A. C. Wheeler	6
George N. Noyes	6	Samuel Wheeler	1
James O'Brien	2	Marshall P. Wilder	23
Richard Oldreive	1	George W. Wilson	2
John C. Park	2	E. W. Wood	7
H. B. Parker	2	W. K. Wood	8
W. D. Philbrick	3	Joseph H. Woodford	2

REPORT

OF THE

COMMITTEE ON ORNAMENTAL GARDENING,

FOR THE YEAR 1874.

By H. WELD FULLER, Chairman.

Favorable as the season has been for horticultural pursuits, few places have been offered this year for inspection. Invitations from three only have been received by your committee; and it may be well to seek the cause of this apparent apathy. Judging from the demand for decorative trees and shrubs, and from the number imported and sold, there appears to be no lack of interest in the subject. But some persons, of large taste and smaller means, perhaps, may think it would be presumptuous or useless for them to enter into competition with men of long purses and broad acres, or that anything they could show would, in comparison, be too meagre for a formal exhibition. Others may regard an "official visit" as a sort of "party" demonstration, to be supplemented by a "spread," with edibles and refreshments, which they cannot afford. All such ideas are mistakes and hindrances, and the sooner they are discarded, the better it will be for those concerned. It should be clearly understood that the Committee are not looking for signs and wonders, or expecting to find perfection. *Progress, right progress!* is the watchword, and no other spread is asked for than that which Nature, fitly treated, offers to the eye. Taste, neatness, and beauty may be found in limited domains; and choice plants may flourish in cunning hands, without an acre of ground or a rood of glass!

Let us remember that the great object of our association is to improve and adorn the *homes* of the people, and to create and diffuse a love of the beautiful, by noticing and presenting examples worthy of imitation, and encouraging, by all means, everything which tends to that end.

The strongest evidence of the culture and refinement of a community is discovered in the general surroundings of their dwellings. We love the spots we have adorned. Polished landscapes and ornamented residences indicate peace and prosperity, order and protection, without which no people can be truly refined. In barbarous countries, or in the rough times of insecurity and war, these are neglected. But the arts of agriculture and horticulture flourish with quiet progress and content. The wealth and independence of a nation depend greatly on its agriculture. Statesmen of all ages have recognized this. The sayings of Cicero are quoted even now. Our forefathers felt the force of the conviction early and strongly. The greatest patriots, Washington included, devoted their money and their energies to it. As soon as the war of the Revolution was over they became alive to it. In 1792, the "Massachusetts Society for promoting Agriculture" was incorporated. Among the first members were the most distinguished lawyers, doctors, ministers, merchants, and statesmen of the country — Samuel Adams, John Adams, Fisher Ames, Christopher Gore, Caleb Strong, John Brooks, John Hancock, Samuel Dexter, Winthrop, Bowdoin, Lowell, Lee, Lyman, Judge Tyng, and other worthies.

In their printed "appeal" they "call in the most urgent manner on every practical farmer" for information and aid, and assert that "our wealth and importance are so intimately connected with and dependent on the success of agriculture that every one who is desirous of advancing the happiness, prosperity, and dignity of his country, its commerce and the convenient subsistence of individuals, will lend his aid," etc. Even at that time, they were pursuing the new enemies in the field — the canker worm and the slug worm.

Thus did they turn their swords into ploughshares and their spears into pruning hooks. First the ploughshare, then the pruning hook! The necessities of life demand the first, agriculture; but civilization and high culture require also, horticulture and floriculture. Fruits soon follow the plough, and flowers follow the fruits; then comes the combination and arrangement of the elements of these; and this is the *Art of Landscape Gardening* — an art ever progressing, and greater than that of the painter who only *copies* a scene; for the gardener in Landscape actually *creates* what he presents, and paints it for the future, with living

and ever-changing groups and colors. By his compositions he adds new beauty to things admirable, and puts out of sight whatever is distasteful; always elevating and presenting the *best*, but concealing the *worst;* managing the harmonies and contrasts with such skill that the *picturesque* and the *beautiful*, like the lion and the lamb, may lie down together without startling the beholder. He uses sunshine and shadow for tinting and flowering, and forgets not breadth or variety. All his plantings, though differing in kind, are so naturally connected or so imperceptibly blended, or led off by detachments or liveried ushers, as to cause no breaks or discord. He never belittles his ground, but enlarges it to the sight by a concealment of its boundaries and by the opening of vistas and distances beyond. He has no mannerism, but makes the most of all peculiarities, and treats each subject according to its needs; making what is tame attractive, by polish or color, or by new objects of interest, and renders what is wild all the more picturesque, by adding to its roughness and entanglements, or by affording a glimpse at its hidden secrets.

Some of the books speak favorably of groups of *two* or more trees or shrubs; but the artist seldom employs an *even* number for small groups or pictures; his groupings of objects, animate or inanimate, are generally of *odd* numbers. And as the finest views give the greatest pleasure, he reserves them, if possible, for the mansion, where the family and their visitors may always enjoy them without effort, nor find them exhausted by the "approach." He eschews small things in a large place, as Job did evil. He does not rank contracted pools as water views, or crook his paths, like a serpent's, without a visible reason. If, from any cause, a turn is wanted, he artfully contrives an obstacle to *show* a reason; for, *whatever appears to be unreasonable, is not natural or agreeable.*

These are some of the rules which govern the ornamental combinations of earth's beneficent productions, and the more natural they seem, the more perfect is the work. *Ars est celare artem.*

> "Who can paint
> Like Nature? Can imagination boast,
> Amid its gay creation, hues like hers;
> Or can it mix them with that matchless skill
> And lose them in each other, as appears
> In every bud that blows?"

It is a matter of congratulation that our materials for landscape gardening have been so largely increased during the last twenty or thirty years. China and Japan, the East and West Indies, Australia, Africa, Mexico, Brazil, and the Cape of Good Hope have been placed under contribution, and our own florists have produced by hybridization some of the most precious of our floral train. If all these acquisitions should be taken from us, what a void would appear! Go where we will, some of these will be there.

Truly, we owe a debt of gratitude to those who have expended so much and done so much for the public good. The number of decorative plants and products introduced and distributed by our horticulturists is remarkable. Things of doubtful character or hardiness often prove valuable acquisitions; and the free interchange of knowledge adds much to the useful as well as ornamental. Our great esculent, the potato, was but partially known in the time of Sir Walter Raleigh; and when afterwards it was carried into Burgundy its use and culture there was interdicted. The *Solanum tuberosum* was supposed to possess the dangerous qualities of the deadly nightshade and to produce leprosy and disease. The gentlemen of Massachusetts have recently added to our resources some of the rarest and most desirable evergreen trees of the world. Boston has done her full share in these experimental efforts, and her environs will compare favorably with those of any other city on this continent.

Having made these preliminary and somewhat desultory observations, your Committee will now pass to

Glen Ridge.

In their last report, mention was made of the new Greenhouse and new Grapery of Edward S. Rand, Jr., erected in the year previous, and of his intention to enter them for prizes the present year. This was done in January last, and, as his orchids are mostly of the winter-blooming varieties, your Committee visited them in February. The day was stormy; the snow several inches deep and saturated with water; but the zeal and hospitality of the host made compensation. The two houses, which were at some distance apart, were described in our report of 1872. The whole length of the Greenhouse is about 135 feet, and its width 20 feet. It is divided

into five compartments, namely; a rose-pit, 45 ft. by 20; a conservatory, 25 ft. by 12; an orchid house, 25 ft. by 20; and geranium and camellia houses, 40 ft. by 20, the first and last named being at the extremes, leaving the orchid house and conservatory in the middle, where the heat is the greatest; a very neat and glazed potting-room being at the side of the conservatory, near the boiler. Good light and ventilation, so essential to orchids, are provided, and the experiment of ground glass, of which a portion of the roof is made, has proved entirely successful. The whole is heated by one of Zirngiebel's tubular boilers, running three rows of pipes on each side, which Mr. Rand reports to be both economical and efficient, giving all the warmth desired without difficulty. But, as the writer well knows that some other boilers have proved eminently satisfactory, he would not be understood to express any preference for the "Zirngiebel."

The construction of the whole building is excellent. The benches are of galvanized iron wire netting; with iron supports and narrow iron side guards, also galvanized. A large water tank occupies the centre of the orchid house, with a walk around it. Here water lilies and other plants were in perfection, and the hanging baskets, cob-work, and orchid-blocks, above and around the visitor, and the curious air-plants with a profusion of splendid blooms, some of delicious fragrance, presented a lively display for the season, many of the flowers continuing from four to six weeks in beauty. This house was at a temperature of 70° and contained many of the most beautiful of the *Aerides*, *Lælias*, *Vandas*, *Oncidiums*, *Dendrobiums*, *Cattleyas*, and other orchids of fine blooming qualities—among them several plants of *Calanthe vestita*, both the red and the yellow-eyed varieties, which were very admirable, their drooping racemes of white flowers, against a background of ferns, producing a lovely effect. As these plants, unfortunately, lack foliage in their flowering periods, a good background becomes indispensable. The new hybrid, *Calanthe Veitchii*, was also in bloom, sending up stalks two feet high, with rich rosy flowers; and plants of the *Lycaste Skinneri alba*, with their long arms full of white blooms, were objects of great interest.

Specimens of the *Limatodes rosea*, with flowers of different shades, from light pink to deepest rose, on different plants, were much admired. The *Odontoglossum grande* was showing a late spike of large yellow and orange blooms three inches in diameter.

A splendid *Vanda tricolor* perfumed the house with its sweet odor, and a plant of *Ansellia Africana*, two feet in diameter, was loaded with bunches of curiously veined flowers, of purple, green, and yellow. The delicate and almost unrivalled *Cœlogyne cristata* showed large spikes of pure white blossoms with a crested yellow lip.

The *Oncidium papilio*, or West India Butterfly-plant, nearly always in bloom, was very marked, and particularly conspicuous for its insect-shaped flowers; and a large specimen of the *Phalænopsis amabilis*, or East India Butterfly-plant, was in full bloom, with flowers three inches wide. The *Oncidium leucochilum*, a white-lipped beauty, was also admired for its rare delicacy.

The *Saccolabium violaceum* and *S. giganteum*, compact in growth, with pendent, evergreen foliage, sent from their tinted, shell-like cups, a delicious fragrance through the room; and the *Dendrobiums—chysotoxum*, *superbum*, *calceolaria* and *nobile*, attracted much notice by their splendid spikes of flowers. The *Vanda cœrulescens*, with its clear amethyst blue, also excited much interest. But the *Bletia Tankervillice* (or *Phaius grandifolius*) was, perhaps, the most striking feature of the house. Of these, there were several very large plants, full of flower stalks, many of them four feet high and studded with blooms, — some having twelve or fifteen stalks and making altogether a magnificent display. Rare *Cypripediums*, with their peculiar slipper-flowers were very prominent; and Pitcher-plants (*Nepenthes*) hung from the roof, while the lovely *Thunbergia Harrisii* trailed in long festoons of rich lavender blooms, intertwined with the tasteful *Clerodendron Thomsoniæ*.

Again, in the month of June, some of your committee visited the place and found all in order, having passed safely through the winter; though the orchids generally were not in such perfection as in their blooming season. The *Cattleya Mossiæ*, that magnificent orchid of La Guayra, both in the hall and hot-house, was in excellent condition and in full bloom, exciting great admiration; and in September the *Cattleya crispa* was also in flower. The *Aerides*, which are among the choicest, especially the species *odoratum*, *Fieldingii*, *Lobbii*, and *affine*, with racemes of red flowers, so rivalled each other that one could hardly decide between them. The *Stanhopeas*, with their curious, pendent flowers, presented a charming aspect, twenty-six varieties furnishing a succession.

The *Lælia Perrinii* was particularly observed; and the *Cœlogynes* — *largenaria*, *maculata*, and *Wallichiana* were excellent. The blue water lilies had closed their flowers in the afternoon, but were evidently well supplied with them. The *Peristeria elata* (Dove Plant, or Holy Spirit) displayed its wonderful form, and the *Angræcum sesquipedale*, a still greater wonder, and which was in bloom in our winter visit, with its long honey tube, was quite a curiosity.

The Camellia and Geranium houses were in fine keeping, and the plants appeared to be free from insects, mould, or decay. The houses, though limited for room, were easily heated, lighted, and operated. The writer, on two subsequent occasions, visited them, finding all in like order.

No other greenhouse was entered for a prize; and as few persons are able or willing to construct a house so thoroughly, and to incur the expense incident to the culture of such plants; and as Mr. Rand has exhibited an excellent structure and has therein produced plants of rare beauty and done good service to the public, your Committee have awarded to him the first prize of fifty dollars.

The Grapery

of Mr. Rand was also visited as above, this house having also been entered for the prize. The building, which consists of one splendid room, 100 feet by 25, is more ornamental than the greenhouse; having high, curvilinear sides and roof of glass, without artificial heat. It contains seventy-five vines, introduced through apertures in the foundation, and nourished by a rich outside border, twenty feet in width. These are finely trained under the glass, and nearly all of them showed a remarkable growth and fruitage for their age. The varieties are the Black Hamburg, Muscat Hamburg, Golden Hamburg, Victoria, White Frontignan, Royal Chasselas, Royal Muscadine, West's St. Peters, and Chaptal. The Committee were delighted with the appearance of the vines and with the house generally, which was admirably built and highly finished, with every convenience of light, water, and ventilation. A full description of its construction having been given in a former Report (1872) it will not be repeated here.

No other grapery was entered for exhibition; and your Committee, approving and appreciating the efforts of Mr. Rand and

his success, cannot withhold from him the first prize of fifty dollars for his grapery, and do accordingly award the same to him therefor.

The next visit of your Committee was to the grounds of

The City Hospital, Boston.

Only a few years ago, this land was redeemed from the ocean, but it has now a friendly soil, and presents, upon the whole, a very pleasing effect of grass and flowers, although in some places hardly smooth enough for a finished lawn.

Its form is nearly that of a parallelogram, between four streets. It fronts on Harrison Avenue about 450 feet, and extends back to Albany Street, about 650 feet; East Springfield and Concord Streets bounding the sides. The lodge and gate for admission are near the north line and on the Avenue. No other buildings are within one hundred and fifty feet of the Avenue. At a proper distance from the side streets stand twin buildings, about 100 feet long (one for the Surgical and the other for the Medical department), and from the easterly end of each springs a quarter-circle colonnade, curving until it strikes a showy central structure with high pillars, which forms, as it were, a key-stone to the arch which connects them all. This central house, surmounted by a dome, is conspicuously elevated above the others, and has a long flight of broad steps facing Harrison Avenue, about 270 feet distant. The large area (120 by 180 feet) between these buildings is formed into an oval by walks around it; and a straight path, cutting the oval in twain, leads from the steps to the street. The borders were planted, ribbon fashion, with lobelias, golden pyrethrum, carnations, heliotropes, roses, pelargoniums, achyranthes, and coleus; a somewhat peculiar arrangement. Near the centre of the oval, on either side of the path, a bed was formed, having a centre of cannas, with rings; first, of ageratums and carnations, mixed; and then, successively, pelargoniums, centaureas, verbenas, and golden pyrethrum; the whole making a neat appearance from the hospital windows.

A drive-way entering near the lodge, sweeps by a very broad curve to a gate at the south end, enclosing on the front a narrow segment of a somewhat irregular curve, more than 300 feet long, divided by the path above mentioned. On each side of this divided green, three flower beds were made in the turf — one being circular, one diamond-form and the third a small crescent.

The circles were planted with a centre of maize, an outer border of fine verbenas, and rings of coleus, centaureas and Palace Gem geraniums: the diamonds had a centre of blue salvias, an outer border of blue verbenas, and a filling of *Abutilon Thompsoni* and white-edged pelargoniums. The little crescents were filled with ageratum, alternanthera, variegated thyme, and echeverias. Although your committee would not recommend this selection or order of plants as the best possible, yet they were thrifty and very pleasing to the sight; and when we consider that the whole amount expended for them was only one hundred and thirty dollars, Mr. Youell, the gardener, is entitled to much commendation. The whole place was highly creditable.

At the time of our visit it was suggested that a small greenhouse would probably be provided in the fall to supply hereafter the wants of the gardener. That anticipation proves to have been well founded, a lean-to 55 feet by 15, having been lately erected.

Your committee are pleased to see the temporary abodes of the sick made so cheerful and agreeable to the eye; and when we reflect that all trees, plants, and vegetation work for us as long as the sun shines or the light lasts, constantly elaborating and giving out the oxygen which we need, and taking up and consuming the nitrogen and other gases which kill, we should rejoice to find our medical friends adopting them. If cut flowers, after decay begins, are not approved, surely, while growth continues and buds open, we may not fear them. All know how grateful flowers are to an invalid.

Before leaving the place, your committee, through the kindness of Dr. Cowles, were permitted to inspect the interior of the buildings, and to learn something of the treatment of the patients and the neatness and conveniences of the establishment. But as the interior of a hospital has little to do with landscape gardening, your committee will only add that they were much indebted to Dr. Cowles and his assistant, as well as to Mr. Youell, for kind attentions and an agreeable visit.

On the tenth day of June, when Rhododendrons were in perfection, the writer passed a delightful afternoon on the estate of H. H. Hunnewell, Esq., at

WELLESLEY,

and, on several occasions since that time, he has enjoyed with others the privilege of examining and admiring its many objects

of interest, although an "official" visit of your committee was not made until the 29th day of August. Their report, however, will reflect the impressions of different months, and the coloring of successive periods; and notice only some of the most striking characteristics of a spot which has acquired almost a national reputation. To describe it fully, in all its details, would be impossible. Wellesley has been visited so often by persons of taste from all sections, and its attractions have been so frequently photographed by artists or mentioned by the press, that such past descriptions would suffice, were it not that changes and improvements are always in progress and every observer views things from his own peculiar stand-point.

For the benefit of the uninitiated, it may be stated that Mr. Hunnewell's entire location includes about four hundred and fifty acres; embracing nearly the whole easterly and southerly shore of the lovely Waban Lake, and running on a level, easterly, across the highway, until by graceful undulations and shadowy groves, it drops into the Charles River. The elegant residences of two of his sons are on the east of the road, beyond his farthest gate, his own mansion being on the west, a good distance therefrom, near the border of the lake, which it overlooks in the rear; having in front a lawn of thirty acres, which spreads its velvet surface most attractively before it. Trees, in variety, are planted occasionally in groups, but thickly where necessary to conceal the boundaries; while inlets, bays, and salient points give shelter to countless rare or tender shrubs without apparently limiting the space.

The Entrance Gateway is about one mile from the steam-car depot, near the foot of a gentle elevation. It is tasteful and appropriate, consisting of four belted posts of red Gloucester granite, with dental caps, ball-tops, and gates and side supports of iron. At the right, stands the Porter's Lodge, under a wooded hillside, the frame work visible and the roof-point flattened, visor-like, in front — unique and picturesque, and completely overrun by the new and vigorous creeper, *Ampelopsis Veitchii*. This hardy vine, of rapid growth, fine foliage, and wonderfully adhesive power, has, perhaps, no equal. On some of the trees it had mounted to the highest branches.

The Approach, or Avenue, rising gradually to the plain, which is fifty-five feet above the lake, makes a wide, semi-circular sweep by the Mansion house and returns to the highway by another gate,

one-fourth of a mile from the Lodge, thereby compassing the great lawn, and opening to the eye many of the charming views with which the place abounds.

On that side, the planting for the sloping ground is dense; and paths, almost invisible, lead through thick evergreens or sunny openings in the woods (where gold and silver hollies, cypresses, and variegated shrubs are clustered), and suddenly emerge into some broader walk, or open into the great lawn. Following one of these, the visitor passes through a Druidical arch of rude stone, with rock-work connected, over which the new vines *Ampelopsis Veitchii* and *Clematis Jackmanni* are profusely creeping, and where dwarf *Musas*, *Cacti*, *Crotons*, *Begonias*, *Dracœnas*, *Echeverias*, ferns, and variegated hydrangeas find and form a home of sweet content, pleasing to every one. Here and there in this skirting of the green, new vistas open like a flash of sunshine; now through a row of purple beeches; now to a remote statue or venerable oak; and now, through long lines of graceful elms, reaching the purple mountain side, miles away; or to the silvery bosom of the lake; or across the water, to the groves, turrets, and fine outlines of Wellesley College.

One sturdy oak, in dignified state and ample dress, stands out in open space where most of these ways centre; and where seats, awnings, and extensive views invite to rest. This tree alone remains, ancient and honorable, all the others having been planted since 1852 by the present proprietor, whose fiat has converted, under Providence, a scrubby plain into forest and garden, and robed it with beauty. Let no man think it useless to plant trees for his own enjoyment with such an example before him.

After leaving the lodge and following the avenue to the crown of the hill, in the month of June the eye is fixed by a vast belt of Yellow Azaleas on the right; which, in great numbers and variety, are wildly grouped together, seeming to fly out in a large flock on a side path, all in full feather, shaking their golden tops and gorgeous wings above the foliage, dazzling the beholder by their brightness and holding him so spell-bound for the moment, that he is almost unmindful of the fine Kalmias, Magnolias, and Andromedas in the back-ground; and of the beautiful little grass plot beyond, where grand specimens of the *Picea Nordmanniana* stand, from eighteen to twenty feet high, conspicuously alone.

Passing this enchantment and looking to the left, multitudes of the most brilliant and fairy-like Rhododendrons, with their gauzy

heads and skirts of green, crowd to the drive-way, and back into the recesses of the wood, beckoning for notice; unconsciously rivalling each other and their neighbors in magnetic power and grace. These cover a large area and abound in other parts also, showing about one hundred and eighty varieties; and the Azaleas seventy-five. Wherever they may be, they repeat the one great lesson of their growth, namely; *shade for foliage, sunshine for flowers, and shelter for either.* The buds which have set thickly for another year, are not in the deep shade, but where the sun has found them. Let this be remembered.

Seldom can any gentleman make such an exhibition with his own plants. But Mr. Hunnewell, to whom the public are indebted for the suggestion of a "Rhododendron Show, on Boston Common," in 1873, not content with that successful experiment, has erected on his own grounds, the present year, a spacious skeleton tent, in the midst of a hedged lawn, studded with like plants, and filled it superbly with masses of blooms, of every shade, from favorite sorts; producing a magnificent display, quite as enjoyable as the first. One could easily imagine that Flora, in her delight, had waltzed around its centre, scattering her flowers on every side, and had, finally, tossed all her light petals in the air, to ride upon the tips of every shoot below. The show was, indeed, excellent, and not unlike its predecessor on the Common; and yet the plants were scarcely missed from their old locations.

Among the most admired, were *Lady Godiva*, *Mrs. Heneage*, *Charles Dickens*, *H. H. Hunnewell*, *Hannibal*, *Onslowianum*, *Atrosanguineum*, *Brayanum*, *Kettledrum*, *Concessum*, *Album elegans*, *Victoria*, *Lee's Dark Purple*, *Titian*, *and Everestianum.*

Near the rhododendrons is the Rose Garden: a narrow parallelogram, perhaps three hundred feet long, replete with choice varieties, and surrounded by a solid hedge or wall of evergreen *Arbor Vitæ*, four or five yards high; cut to a face, and as impenetrable as those of the Vatican — this setting of the picture being of itself a great curiosity. Admission is had through a nicely arched aperture at the end of a central walk dividing the roses. Here they find protection, and in their season gladden the spirit and furnish a gay escort to

The Greenhouses and Flower Garden.

The greenhouses and forcing houses are very extensive, being eleven in number, arranged on two sides of a hollow square,

namely: one for a common greenhouse; one for ferns and palms; two for stove plants; two for grapes; one for an orchard house; two for peaches; one for plums; and one for apricots and plums. All these were in admirable condition, and the ferns, palms and stove plants exhibited a most luxuriant aspect—decidedly tropical!

The following are some of the most valuable decorative plants of recent introduction here:

Dracæna Mooreana,	*Croton Youngii*,
" *Chelsoni*,	" *Weisimanni*,
" *Baptistii*,	" *Veitchii*,
" *Youngii*,	" *cornutum*,
" *imperialis*,	*Pandanus Veitchii*,
" *amabilis*,	*Dieffenbachia Bausei*,
" *magnifica*,	*Cypripedium Dayanum*,
" *porphyrophylla*,	

the elegant palm *Cocos Weddelliana* (*Glaziova elegantissima*), and the *Phormium Colensoi*, which far surpasses the *Phormium tenax variegata*.

The beautiful climbers, *Bougainvillea speciosa*, *B. spectabilis* and *Bignonia venusta*, in the greenhouse, made a strong impression; and the hot-house plants, perfectly trained, excited unqualified admiration.

But the spacious Flower Garden — with its high hedges on the south and west, and the dense foliage of the forest trees on the north and east, spreading its soft cloth of green over the large centre and side areas, where many elegant beds and standards are inserted; involving plants of every clime, new, or curious and ingeniously arranged — was the study and the cynosure of all. The plantings in no case approach within one or two steps of the wide pathway. On one side, a long, straight ribbon of broad stripes, with large plants of uniform size, attracted attention; the outer edge being of *Golden Pyrethrum;* and then, successive rows of *Coleus Verschaffelti*, fine *Duchess Pelargoniums*, *Iresine Lindenii*, and *Centaurea candidissima* for a centre.

Circles, and beds of various forms, and borders many feet wide, outside the walk, are planted with a profusion of rich and rare semi-tropical plants — *Cannas*, *Erythrinas*, *Alocasias*, *Calocasias*, *Aralias*, *Arundos*, *Phormiums*, *Agaves*, *Yuccas*, *Musas*, and *Dracænas* in variety, including *D. indivisa*, *D. australis*, and *D. ferrea*, — the last named being the best of all the dark foliaged

varieties for exposure to the sun. One large circular bed surrounded by a perfect border of Earl of Rosslyn pelargoniums, was greatly admired.

Splendid specimens of the palms, *Areca lutescens*, *Phœnix dactylifera*, *P. reclinata*, and *Seaforthia elegans*, and of the superb *Chamærops Fortunei* and *C. excelsa* were noticed. The *Eulalia Japonica*, of recent introduction, which so much resembles the *Arundo*, was also observed, and is evidently destined to become a general favorite, its leaves being striped like those of *A. donax variegata*, and its habit being more compact and graceful.

Lantanas, trained on a single stem six feet high; *Abutilons*, eight feet high; and the *Coprosma Baueriana variegata*, became exceedingly effective as standards.

Fine plants of *Ferdinanda eminens*, *Wigandia Caracasana*, *Uhdea bipinnata*, of Mexico, *Acacia lophantha*, *Bocconia Japonica*, *Acanthus latifolius*, and *Papyrus Babylonica* were also prominent.

The chief attraction and marked feature of the garden, however, was the great bed of Echeverias and other Succulents, which for richness, novelty, and arrangement, your Committee have never seen equalled. The bed was eight yards long and four yards wide, raised about a foot above the surrounding grass. Its edges were at an angle of 45°, and framed around by three successive rows of *Echeveria secunda glauca*, touching each other, the largest being the lowest. The four sloping sides thus planted resembled a picture frame of shells, on a large scale. Back of these, on the level surface, three rows of *Echeveria metallica glauca*, a stronger and more striking variety, were set. In the centre, a large *Agave Americana* presided, surrounded by a patch, eight feet in diameter, of large *Echeveria metallica*, planted on a carpet of *Alternanthera amœna;* the metallic lustre of the *Echeverias* contrasting finely with the bright foliage beneath. A belt of the *Alternanthera*, a yard wide, extended lengthwise through the middle of the bed, and at equal distances therein were two large plants of *Yucca quadricolor*, and two of *Yucca aloifolia*, adding much to the effect. All other spaces were filled with *Echeveria sanguinea*, *E. agavoides*, *Agave filifera*, *A. schidigera*, *A. media-picta*, *A. Mexicana*, and other kinds, in pairs. Two elegant plants of *Aloe arborescens*, three feet high, with their thick drooping leaves, overreaching several of the larger *Echeverias*, gave a charm to the whole. It was estimated that more than two thousand succulents rested in this single bed.

Two brick structures, mainly under ground, but well ventilated, are prepared for tender and half-hardy plants in winter, and, under an extensive carriage house, a third place, where a team may enter, is provided for heavier shrubs and trees, where Azaleas and Araucarias are stored. These depositories, late in the fall, presented a truly captivating sight; the closely packed variegated foliage of the Crotons and gold and silver Hollies, with the intense polish of the leaves and buds of the Rhododendrons being very pleasing.

Not far from these, and beyond a screen of trees, stands the Mansion house, a large square building, with a swelled front entrance, on a slight parterre. It is not, like too many others, crowded on to the very verge of the lake, but has space behind for a set of formal flower beds, with intervening walks, around a small fountain, where plants of brilliant bloom are annually arranged.

In front of the house, on the raised border, a fine display of succulents and flowers in pots, from the greenhouse, attracts attention, while good sized agaves, yuccas, and palms and the pendent vincas and humble sempervivums look for an approval.

Connected with the mansion by a hall, on the right, is a lofty Conservatory, about fifty feet in length, after the Ionic style, with voluted columns, and immense, arched windows, each of a single pane of glass. It is built on a raised granite foundation, with running panels, and has at the end a semicircular portico, of the same height and finish; in the middle of which is a statue of Flora, facing the aisle, with other marble ornaments; providing thus an elevated site for air or rest, with almost matchless scenery.

The tessellated pavement of the interior is filled, on either side, with the choicest stove and other plants in perfection; presenting the gorgeous spectacle of a tropical Eden. Here the dwarf *Musa superba* and the aspiring *Musa ensete*, so admirable for conservatory decoration, appear in all their glory, undisturbed by wind or rain, the *M. ensete*, only three years from the seed, having attained the height of twenty-five feet, with leaves fourteen feet in length and three in breadth, without a spot or blemish. Of all the productions of nature this may be called the grandest; and of all specimens, known to us, this may be deemed the best.

In front of the building, elegant vases of ornamental plants occupy prominent positions and stand upon the square pedestals of

a barrier-wall which projects towards the avenue; and on the greensward, two excellent specimens of *Araucaria imbricata*, a dwarf deciduous cypress, and a purple beech trimmed to a hemisphere, were noticed.

On the left of the mansion door, three very tall magnolias, one white and two purple, are growing near an eccentric, weeping elm, which throws its arms wildly into the air and then plunges, like a banian, for the ground, close to the avenue. Several *Virgilia lutea* trees are seen here, and of such merit that your committee must express their surprise that they have not been more generally introduced. For shape, foliage, flower, and moderate size, they have no equals; their brittleness being alone against them.

Two paths from the house unite into one which leads northerly on the bank of the Lake, presenting constantly delightful views, until it reaches a point of wooded land, around which the water turns abruptly to the east, opening to the eye a panorama of exquisite scenery. Here, within a rustic circle, a spacious arbor, of cunning workmanship and design, has been constructed; mostly of sapling spruces, cut into short pieces and placed side by side, like successive pleats, on the frieze, or wrought into multiform and fanciful figures about the walls and windows. Descending thence, by a tortuous course, amidst wild shrubbery and rockwork, it reaches an elaborate Pavilion or Boat House, architecturally constructed on a high basement, with many arches and of large dimensions, which juts out from the projecting shore, sheltering the boats which occupy the lower story — an object of much beauty in itself, but doubly valuable for its enchanting prospects and undisturbed retirement. Near it, is

The Grotto.

A rustic, vine-clad seat and an elaborate airy foot-bridge, close by, mark the crossing of a small inlet which forms the base of a jagged cavity or dell in the high bank, where ponderous bowlder stones are rudely interlocked and heaped upon the sides far up into the wood. These are all moist and mossy from the spray of an artificial jet, and their crevices are filled with hardy ferns, sedums, saxifrages, and Alpine plants; embellished by *Dracænas*, *Marantas*, *Begonias*, *Opuntias*, *Funkias*, *Alocasias*, *Calocasias*, *Callas*, *Cacti*, *Hermerocallis*, *Panicums*, *Mesembryanthemums*, *Sempervivums* and dwarf *Musas*, promiscuously thrown together, half cover-

ing the rocks with their varied flowers and foliage, extending to the water's edge; thus constituting a Rockery, Fernery, and Grotto of wonderful grace and luxuriant growth — a fit terminus and accompaniment of

The Italian Garden.

Few places in New England have attracted the attention or excited the wonder of all classes like this. It has been photographed and pictured, time and again, and visited by thousands, yet its curious contents and formation appear as fresh and as novel as ever. Nature seems to have provided here, most felicitously, a cove for the purpose, with high banks, and a fine delta below, just above the surface of the Lake, with trees at each extreme. Its rude shores and slopes have been converted by the hand of man, into straight hillsides, terraced and run together at right angles; the top lines continuous, and the declivity aligned by several long levels mitred together and extending from end to end, where they curve into the woods. These, sodded and planted in the most formal style, have an imperial grandeur. Their unity and extent, with their weighty masses of foliage and shadow, give to the whole an impress of majesty and strength.

While it resembles, in some respects, the famous gardens of Lake Maggiore, its position, construction, and surroundings, make it, in this climate, even more attractive. The easterly face, as viewed from the grotto, with its heights of impenetrable green, its deep shadows, and long ranges of levels — rising one above the other, in succession, to the parapet of a bank-wall—and the stiff points of conical figures, standing like sentinels around — strikes you, at first sight, as a huge fortification — the openings in the dense foliage disclosing the embrasures. This resemblance is aided by a similar arrangement of the southerly side, though differently planted.

In a moment, the solid ramparts and breastworks of the imagination, change into hedges of marvellous thickness, compact as turf; the sentinels become evergreen tops, lifting their heads "all shaven and shorn" out of their masses: and White Pines and Scotch start up, here and there, clipped into every disguise, thimble-shaped, dome-shaped, rounded, pointed or collared — now as tall spindles, with four or five bristling rings, at intervals, growing larger as they descend; now as mammoth muffs; or in full

dress, with prim, judicial dignity. Amongst them, a native round-headed beech is put into a strait jacket and rises up like a spire, hardly to be recognised. In a word, all is eccentric and fantastical — a new revelation! It is the curtained chamber of the Naiads! Nature *en masque!* Grotesque figures of men and beasts guard the portals, and vases innumerable of fancy plants line the rural walks. One grand staircase, of hammered granite, runs from terrace to terrace, down from the upper world to the fairy-like hall below, with plinths and flower holders at every landing. A highly ornamental balustrade defines the margin of the lake, and bounds a charming promenade upon its border, with steps to the water. Palms, floral gifts, and rich exotics, in profusion, grace the floor-ground, and beds of beauty are made up to fill the areas in the rear. A row of Irish yews, in tubs, flanks the upper walk, which, by a few steps at the easterly end, scales the parapet and gives the visitor an easy access to the entrance avenue.

The view from the battlements, when suddenly opened from the Main Avenue, down upon the odd forms in the lower depths, and upon hedges wide enough for carriages to pass each other on their tops, with the vast masses of shade and the flashing of the silver lake, can never be forgotten.

Leaving this scene and aiming for the old oak, the visitor passes a circle in the lawn, about five yards wide, composed wholly of variegated honeysuckles with a border of *Clematis Jackmanni*, trained to the centre and intermingled, with such richness of color, fulness of vigor, and remarkable effect, as to delight the observer.

Entering again the path of the yellow Azaleas and descending towards the north, a magnificent *Andromeda floribunda* is seen; continuing on still further, he enters the vale, leading round towards the garden and the lake—the sides of which are being already converted into an extensive Pinetum, of the rarest and best Coniferæ of the world, especially of China and Japan. A list of the Retinosporas, Cypresses, and other Coniferæ which Mr. Hunnewell exhibited at your show, in September last, being embraced in the Report of the Flower Committee, will be omitted now; but as that report will not give the size of some of his collection, it may not be amiss to add the same hereto, as furnished by Mr. F. L. Harris, the accomplished gardener, through whose skill and care

the wishes and plans of Mr. Hunnewell have been so long and so admirably executed. The perfection of his work, in houses and field — his cultivated taste and quick perception of the beautiful — commend him in the highest degree. And when this Pinetum, as planted and conceived, shall have attained the dignity of age, it must become, in the future, one of the most prominent features of the place.

The height of some of the rarest Coniferæ is as follows: —

Abies Albertiana, (spread 10 feet) . .	10 feet.	
" *Douglasii*, ...	8 "	
" *orientalis*, ...	20 "	
Larix Kæmpferi, ...	8 "	
" *leptolepis*, ...	25 "	
Picea Cephalonica, ...	20 "	
" *grandis*, ...	11 "	
" *lasiocarpa*, ...	6 "	
" *nobilis*, ...	5 "	
" *Nordmanniana*, ...	20 "	
" *Pichta*, ...	25 "	
Pinus Koraiensis, ...	10 "	
" *Massoniana*, (spread 10 feet) . .	10 "	
Retinispora filifera, ...	4 "	6 inches.
" *obtusa*, ...	13 "	
" " *aurea*, . . .	6 "	
" *pendula*, ...	7 "	
" *pisifera*, ...	8 "	
" " *aurea*, . . .	9 "	6 inches.
" *plumosa*, (spread 5 feet) . .	7 "	
Thuja pendula, ...	9 "	
Thujopsis dolabrata, ...	4 "	

To Mr. Hunnewell, your committee are much indebted for the kindest attentions and the most hearty co-operation in their examination. They could not fail to see with what personal interest he regarded everything, recognizing all his plants by name, and feeling towards them and speaking of them as if they were his children.

And now, as this report will probably be the last from the pen of the present chairman, who, compelled by circumstances,

after eight years service, begs to be excused from further continuance on the Committee — he takes this opportunity to thank the Society, individually and collectively, for the many honors they have bestowed upon him, and for the uniform kindness and courtesy which he has constantly received from its members.

All which is respectfully submitted.

For the Committee,

H. WELD FULLER, *Chairman.*

REPORT

OF THE

COMMITTEE ON PUBLICATION AND DISCUSSION.

The Committee on Publication and Discussion feel that a report of their doings is to some extent superseded by the publication, as Part I, of the TRANSACTIONS for 1874, of the discussions held last winter, which speaks better than the Committee can of the success of those discussions; nevertheless they wish to say in regard to the hope, expressed in the note prefatory to the TRANSACTIONS, that discussions might be held during the summer months, that its failure is not owing to any want of diligence on the part of the Committee. As in previous years, they had planned a discussion, on the culture of the rose, during the rose show, but although many of our members possess the ability to give us an essay on the subject, which would be both valuable and interesting, the Committee were unable to find one, among several to whom they applied, whose time and other circumstances would enable him to prepare a paper to introduce the discussion.

The By-Law establishing this Committee holds it "answerable that the typographical and literary execution of the publications of the Society shall not be discreditable." The Committee trust that the last publication issued will be deemed to have met this requirement, and if it does not rise above this negative standard to positive excellence, they will spare no exertions in regard to future publications.

The Committee deem it not creditable to the horticulturists of Massachusetts that no journal, specially devoted to their interests, is published in this city, where, for thirty-four years, one of our ex-presidents maintained a periodical which is so honorable a memorial of his labors as a horticulturist; and they are not without

hopes that, if not undertaken by private enterprise, the Society may, at some future time, be justified in establishing a journal which shall be a representative of the horticulturists of Massachusetts and New England. They indulge the hope that the publication of the reports of the discussions held last winter, immediately on their conclusion, as Part I, of the TRANSACTIONS for 1874, may be a step towards this desirable end.

The Committee would add that copies of our TRANSACTIONS have been sent by the Corresponding Secretary to all the prominent Agricultural and Horticultural Journals in the United States and Europe, many of which have spoken in terms of high commendation of our publications, and given liberal extracts to their readers. The Secretary has also sent copies freely to kindred societies, whose publications we hoped to receive in return, but we regret to say that although many have thus favored us, such responses have not been as general as could be wished.

No part of the appropriation of $300, placed at the disposal of the Committee, has been expended, but they would ask for a renewal of it, for use if occasion shall arise.

WILLIAM C. STRONG,
EDWARD S. RAND, JR.,
JOHN M. MERRICK,
} *Committee on Publication and Discussion.*

REPORT OF THE EDITOR.

The first duty devolving upon the editor after the passage of the vote establishing that office, I found to be the completion of the TRANSACTIONS of the Society for 1873, a small part of which was then printed. Much labor was expended on the proof sheets to secure correctness in the botanical and pomological names, especially the names of new plants. It is believed that for correctness these will compare advantageously with those found in the TRANSACTIONS of previous years, and if perfect accuracy has not been attained it must be attributed to the fact that for many of these names there exists no authority beyond the catalogues of the European nurserymen by whose enterprise the plants have been originated or introduced.

While the work above mentioned was going on, the Saturday discussions also occurred, the notes made at these meetings being afterwards more fully written out and submitted to the various speakers for approval, or correction if necessary. When these discussions were ended for the season, I suggested to the Committee on Publication that it might be well to publish them immediately, to keep alive the interest which had been awakened, as well as for the reason already mentioned in the report of that Committee. This suggestion was approved, and it was also determined that their typographical execution should be an improvement upon that of the TRANSACTIONS for 1873, which was far from satisfactory. No attempt was made to give a verbatim report of the discussions, but only to preserve their substance, which was thought by the Committee to be reasonably successful.

In the intervals between correcting the proofs of the TRANSACTIONS, and since these were published, I have, by the advice of the Committee on the History of the Society, been engaged on that work. Some errors in statements in the Historical Sketch of

Horticulture in the United States, which forms the introductory chapter, suggested a general examination into the authorities quoted, which has resulted in the addition of much new and interesting matter, and the re-arrangement, to a great extent, of that previously collected. It was believed that when this introductory chapter was completed much more rapid progress would be made, and this expectation was realized so far as regards the first chapter, on the organization and early history of the Society; but on coming to the next two chapters, which relate to the foundation of the Mount Auburn Garden and Cemetery, and their history while connected with the Society, it was found that omissions, additions, and re-arrangements might advantageously be made, which have resulted in re-writing a great part of these chapters.

The interruptions arising from the Saturday exhibitions making the writing of a historical work difficult on that day, I have, at the suggestion of the Librarian, busied myself in writing, upon each plate in the lately purchased copy of the "Floræ Danicæ," the name of the plant there represented, which when completed, will save the trouble of referring to the catalogue prefixed to each volume, and greatly increase the value of this magnificent work. A part of my Saturday's labors has also been the preparation, when the Chairmen of the various Committees, whose duty it is according to the By-Laws, did not find time for it, of a report of each exhibition, for publication in the "Evening Transcript."

Another matter which has occupied much time is the examination of specimens of fruit brought to the hall to be named, which in the absence of the Fruit Committee have been turned over to me. The greater part of the specimens which have been identified have been found among the comparatively small number of varieties now in cultivation, but occasionally others, survivors of the large collections of former times, which are seldom seen, have been presented, and have necessitated reference to the pomological books in the library for their identification. One of the earliest and most constant objects of the Society has been the establishment of a correct nomenclature of fruits, and I have thought it worth while to give a careful examination to all specimens presented for name, and to investigate the names of the less common kinds, that they might not be wholly forgotten. It cannot be denied that there is much satisfaction in knowing certainly the

name of any fruit, even though it be not of the most valuable character. In all doubtful cases assistance has been obtained from such adepts in pomology as were accessible. While on this subject I may say that those who seek to ascertain the names of fruits will be much more likely to be successful if they will present normal and perfect specimens for examination, than when they bring specimens, which, as in many instances, have lost the stem, so important a characteristic, especially of pears, and which often necessitate the remark when a fruit is presented, "that it is not a fair specimen of its kind." It may be that this is often unavoidable, as growers wish to identify the fruit of a tree as soon as it bears, and the first produce of a young tree frequently varies from the type of the variety. The chances of identification are much greater with several specimens than with a single one, and accurate information as to the habit of growth of the tree is also of great assistance, but seldom thought of by those who bring fruits for name. These remarks are introduced here for the information and assistance of novices who wish to have their fruits correctly named, and I think none of those who have seen the rubbish sometimes presented, as if anything were good enough to identify a fruit by, will deem them out of place. I would not have it understood, however, that even the inferior specimens have been neglected. On the contrary they have received as careful examination as the better ones, and have been identified to the best of our ability. But we do greatly prefer, both on account of inquirers and on our own, to have fair specimens presented, in such a state that we shall not be compelled to ask first of all, "Where's the stem?"

The interruptions during the annual, as well as the weekly exhibitions, were such as to make it difficult to carry on the work of the history, and under these circumstances I complied with the request of the Chairman of the Fruit Committee to assist in the award of prizes, two of the members of that Committee, owing to sickness and other causes, being unavoidably absent. I also made quite a full report of the exhibition, which may be found in the "Horticulturist" for November, 1874.

On the 20th of October a large collection of apples and pears was received here from the Fruit Growers' Association and International Show Society, of Halifax, with a request that they should be examined particularly as to the correctness of the names. A

special meeting of the Fruit Committee was held for the consideration of this collection, but as the committee had not the time to examine them as carefully as was desirable they requested me to do so. Very soon after the formation of this Society, a Committee was appointed to facilitate an exchange of fruits with other societies for the purpose of establishing their nomenclature, and as we were much gratified with the revival of this old custom, and felt it an honor to have the authority of the Society sought in regard to this subject, I did my best to sustain the credit of the Society by a careful examination, and a full report, which was transmitted to the Halifax Society by the Secretary. A smaller, but very handsome, collection of apples was also received from St. Joseph, Mo., with a similar request, which were in like manner examined and reported on, and I believe that the senders of both these collections were much gratified with the information received. Notes of the varieties new to us were also made for the use of the Fruit Committee, as well as of several new fruits not comprised in these collections. These notes will be found appended to the Report of the Fruit Committee.

Many other calls have been made on my time which it is difficult to particularize, sometimes, for example, from the Librarian, when he has thought that the experience acquired in making the Catalogue of the Library might be of use, but it is believed that enough has been said to give an idea of the manner in which the rather indefinite duties of this new office have been performed, without further extending this report.

Robert Manning, *Editor.*

REPORT OF THE SPECIAL COMMITTEE

ON THE

DESTRUCTION OF NOXIOUS INSECTS.

The Committee appointed to consider the expediency of petitioning the Legislature for the enactment of a statute for the protection of orchards against the ravages of insects, would respectfully report:

That they were unanimous as to the desirability of the ultimate object sought, but doubts were expressed by some of the committee as to the possibility and expediency of attaining it by legislation. None were disposed to deny that the subject presents many and serious difficulties, but the committee are not prepared to say that these difficulties are insuperable. They are unanimous in the opinion that much good may result from bringing the matter before the public, and suggest that possibly in this way new and practical ideas may be elicited. They would propose co-operative effort on the part of Agricultural and Horticultural Societies throughout the state, and they believe much good may result from earnest, persistent, and continued agitation. Assurance has already been received from the Secretary of the Worcester County Horticultural Society, of the readiness of that flourishing and influential society to co-operate in any reasonable measures in this direction. A petition to the Legislature, even if unsuccessful, would do much to direct the public attention to the magnitude of the evil.

It seems especially fitting that the Massachusetts Horticultural Society, occupying so prominent a position in the state, should take the initiative in this matter, but your committee believe that if the influence of the State Board of Agriculture, as the official guardian of the interests of agriculture in the Commonwealth, were combined with that of this Society, it would be of great advantage.

Your Committee would therefore recommend that a committee,

of which the President shall be chairman, be appointed with full power to take such action in this matter, in connection with the Board of Agriculture, after conference or correspondence with the various Agricultural and Horticultural Societies in the state, as shall seem to them expedient. Your Committee believe that in this way the public feeling in regard to the expediency of the measure proposed can best be ascertained, and if it be decided to petition the Legislature, the prospect of success will be much greater if supported by these organizations throughout the state, than if made by any one society, however influential.

Here, perhaps, this report might close, but the Committee deem it well to add a word in regard to the education of the public in a knowledge of the habits of such insects as are injurious to vegetation. If such knowledge were generally diffused, there might be less need of legislation to effect the object we have in view, but if such a need existed, the knowledge we speak of would make it far easier to procure the needed legislation. Or if such legislation shall be deemed inexpedient, then we must rely wholly on educating the people to the possibility and necessity of concerted action to exterminate the insect pests of the gardener.

The number of students in Entomology in the United States, is now much greater than in any other branch of Zoology. At the meeting of the American Association for the advancement of Science, in 1873, so many were present that a sub-section of Entomology was organized under the presidency of John L. Leconte, who, in his address, gave some "Hints for the Promotion of Economic Entomology in the United States," in which, besides the methods in common use among gardeners for destroying insects, he mentions the communication of fungoid disease (like *pebrine*, which affects the silkworm) to other lepidopterous larvæ, and remarks that he is extremely hopeful of the result of using this method, having learned of an instance in which, from the communication of the disease by some silkworms, the whole of the caterpillars in a nine-acre piece of woods were destroyed. If this disease could be introduced among the myriads of caterpillars, which Mr. Moore spoke of in our recent discussion, as infesting the wild cherry trees in Concord, it would doubtless be more effectual in exterminating them than all the laws that could be passed by the Legislature. Dr. Leconte also advises the introduction of parasites, known to affect noxious insects in other localities. Thus a parasite of a coccus, which attacks the apple tree, has prob-

ably been introduced into the northern part of Illinois, where it was previously unknown. This whole paper is worthy the attention of all interested in the subject. It may be found in the "American Naturalist," Vol. vii, p. 710, as well as in the "Proceedings of the American Association for the Advancement of Science for 1873."

To show the means of education in this subject provided in other countries, we quote a statement from the "London Garden," of Oct. 31, 1874, — "The exhibition of insects injurious to trees and garden plants, which was held in the Orangery of the Tuileries, has just closed. The distribution of prizes took place on the 5th of October. The highest premium was awarded to a Vienna savant, for a magnificent atlas exhibiting all the organs and forms of the Phylloxera. The exhibition, which lasted twelve days, was very popular; 20,000 persons paid the entrance fee, and 30,000 free tickets were issued." *Our* exhibition in this line is confined to the two small cases hanging in the Fruit Committee's room, which, however, are admirable as far as they go, but we are indebted for them to a gentleman not a member of the Society.

But we are not without hopes that in the future we may see the forms and habits of these noxious insects as fully exhibited here for public information, and in the meantime we must rely for disseminating such information, upon our Agricultural and Horticultural Societies and Farmers' Clubs, and upon the spread of books upon Entomology; not only those which may give practical directions how to destroy noxious insects, but those calculated to induce and assist a careful study of their habits, that we may be armed with additional means to combat our foes. We trust that our own Library Committee will see the importance of keeping the library fully supplied with all publications on this subject that can in any way be of service to members. In view of the importance of the subject, your committee would further recommend the re-establishment of the Professorship of Entomology, which, for reasons unknown to them, was abolished a few years since.

ROBERT MANNING,
JOHN B. MOORE,
EDWARD S. RAND, JR.,
BENJ. G. SMITH,
WM. H. SPOONER,
} *Committee.*

REPORT

OF THE

LIBRARY COMMITTEE.

In submitting the annexed annual lists, drawn up by the Librarian, of additions to the library during the past year, the Chairman has only to report the usual steady growth of the collection, which may now be said to include all works on Horticulture that the book market can supply in the ordinary course of traffic. Many rare and costly works still remain to be acquired; but, for these, it is necessary to watch for opportunities which, in some cases, do not often occur. Meanwhile, the books and periodicals which are constantly appearing, will steadily add extent and value to our library, as the descending sap adds every year a new layer of living wood to the growing stem.

As all the bills are not yet received, it is impossible at this moment to render an exact account of the year's expenditure. The Library account will therefore form a part of the Treasurer's report. The appropriation for 1874, has, however, been nearly all expended, and the income of the Stickney fund has been used in accordance with the terms of the gift.

For the Committee.

F. Parkman, *Chairman.*

LIBRARY ACCESSIONS IN 1874.

BOOKS BY PURCHASE AND EXCHANGE.

Verschaffelt, A. Iconographie des Camellias. Large 8vo.
Callcott, Mary. Scripture Herbal. Small 4to.
Plumier, Charles. Plantes de L'Amerique. Folio.
Parkinson, John. Paradisus Terrestris. Folio.
——— ——. Herbal. Folio.

Gmelin, J. G. Flora Sibirica. 4 vols. 4to.
Batsch, A. J. G. C. Generum Plantarum. 4to.
Darwin, Erasmus. The Botanic Garden. 2 vols. 4to.
Knight, T. A. The Formation of Bark on Trees. 4to.
Vaucher, J. P. Monographie des Orobanches. 4to.
Boccone, Paulo. Iconés Rariorum Plantarum. 4to.
Meager, L. The English Gardener. Small 4to.
Floræ Danicæ. 16 vols., and 1 vol. containing two Supplements. Together 17 vols. folio, 3,000 colored plates.
Redouté, P. J. Les Liliacées. 8 vols. Large folio. 486 colored plates.
Salm Dyck. Aloes et Mesembryanthemi. Fasc. 4, 5, 6 in 1 vol. 4to.
Queckett, John. Lectures on Histology. 8vo.
Hibberd, Shirley. The Amateur's Greenhouse and Conservatory. 8vo.
Loudon, J. C. Encyclopædia of Gardening. Edited by Mrs. Loudon. Thick 8vo.
——— — —. Hortus Lignosus Londinensis. 8vo.
Warner, Anna. Gardening by Myself. 12mo.
Phillips, H. Flora Historica. 2 vols. 8vo.
Seemann, B. Popular History of Palms and their Allies. 16mo.
Paxton, J. The Dahlia. 16mo.
Burbidge, F. W. Cool Orchids. 16mo.
——— — —. Domestic Floriculture. 8vo.
Lankester, Mrs. Wild Flowers. 16 mo.
Bréhaut, T. C. Modern Peach Pruner. 16mo.
Lankester, E. Half-hours with the Microscope. 16mo.
DuBreuil, M. Culture of Fruit Trees. Translated by William Wardle. 12 mo.
Masters, Maxwell T. Botany for Beginners. 16mo.
Youmans, Eliza A. First Book of Botany. 12mo.
Hobkirk, C. P. Synopsis of British Mosses. 16mo.
Plues, Margaret. British Ferns. 8vo.
——— ——. British Grasses. 8vo.
Moore, Thomas. British Wild Flowers, 8vo.
Harvey, W. H., and O. W. Sonder. Flora Capensis. 3 vols. 8vo.
Oliver, Daniel. Flora of Tropical Africa. 2 vols. 8vo.
——— ——. Lessons in Elementary Botany. 16mo.
Hand book of Pinaceæ. By "Johannes Senilis." 8vo.

Lee, Mrs. E. Trees, Plants, and Flowers. 8vo.
Hole, Rev. S. R. Six of Spades. 8vo.
Kirby, M. and E. Chapters on Trees. 8vo.
Gray, S. O. British Seaweeds. 8vo.
Ingram, J. Flora Symbolica. 8vo.
Flora Medica. By a member of the Royal College of Physicians. 2 vols. 8vo.
Daubeny, C. Trees and Shrubs of the Ancients. 8vo.
Adanson, M. Familles des Plantes. 2 vols. 8vo.
Thunberg, C. P. Flora Capensis. 8vo.
Koch, G. D. J. Floræ Germanicæ et Helveticæ. 8vo.
Cobbett, William. English Gardener. 8vo.
——— ——. The Woodlands. 8vo.
Planting and Ornamental Gardening; a Practical Treatise. 8vo.
Barlow, P. On the Strength and Stress of Timber. 8vo.
Withers, W. The Acacia Tree. 8vo.
Greenwood, G. The Tree Lifter. 8vo.
Rush, B. The Sugar Maple. Small 8vo.
Cranston, John. Culture of the Rose. 8vo.
Hosack, David. Catalogue of Plants in Elgin Botanic Garden. Small 8vo.
——— ——. Facts in relation to the Establishment, Progress, and Disposal of Elgin Garden. Small 8vo.
Planting and Management of Woods and Coppices. Small 8vo.
De Lambertye, L. Plantes a Feuilles Ornementales. 2 vols. in 1. 18mo.
Haworth, A. H. Observations on the Mesembryanthemum. 8vo.
——— — —. Saxifragearum Enumeratio. 8vo.
Dodonæus, Rembertus. Frumentarum Leguminum Historia. 16mo.
——— ——. Florum et Coronarium Historia. 16mo.
——— ——. Purgantium Aliarumque Historiæ. 16mo.
Wernischeck, Jacobus. Genera Plantarum. 16mo.
Miller, Phillippus. Catalogus Plantarum Officinalium. Small 8vo.
De Kirwan, C. Les Conifères, Indigènes et Exotiques. 2 vols. in 1. 16mo.
Johnson, G. W., and R. Reid. The Strawberry. 16mo.
Main, J. Hand Book of Fruit Trees. 24mo.
Cowell, J. Curious and Profitable Garden. Small 8vo.
Murray, A. Notes on California Trees. Part 1. 8vo.
——— —. Synonymy of various Conifers. Part 1. 8vo.

Bosanquet, W. H. A Lecture on Window Gardening. 12mo.
Transactions of the Illinois State Horticultural Society, for 1863, '64, '65, '66. 1 vol. and 3 pamphlets. 8vo.
Decaisne, Jh., and Ch. Naudin. L'Amateur des Jardins. 4 vols. Small 8vo.
Le Bon Jardinier, 1860, '62, '68, '74. 4 vols. Thick 12mo.
Dupuis, A. Conifères de Pleine Terre. 16mo.
——— —. Arbres d'Ornement. 12mo.
——— —. L'Œillet. 16mo.
Bossin, M. Plantes Bulbeuses. 12mo.
Lemaire, Ch. Plantes Grasses. 16mo.
Lachaume, J. Le Rosier. 16mo.
Delchevalerie, G. Les Orchidées. 16mo.
Préclaire, J. L. Traité d'Arboriculture. 1 vol. 8vo., and Atlas, 1 vol. 4to.
Leroy, André. Dictionnaire de Pomologie; Pommes. 2 vols. in 1. 8vo.
Transactions of the Linnean Society. Vols. 22—28. 7 vols. 4to.
Journal of the Proceedings of the Linnean Society; Botany. 13 vols. in 8. 8vo.
Mas, A., and V. Pulliat. Le Vignoble; Première Année. Nos. 1—11. Royal 8vo.
Newton, G. W. Timber Trees. 8vo.
Johnsón, J. F. Landscape Gardening. 4to.
Packard, A. S. Our Common Insects. 12mo.
——— — —. Half-hours with Insects, parts 1—4. 12mo.
Pfeiffer, L. Nomenclator Botanicus. 8vo. Vol. 1, Fasc. 1—26 and Vol. 2, Fasc. 1—26.
——— —. Synonima Botanica. 8vo.
Wooster, David. Alpine Plants, second series. Large 8vo.
Hooker, W. J. Synopsis Filicum, 2d edition, with Appendix. 8vo.

BOOKS AND PAMPHLETS BY DONATION.

D. Landreth & Sons. Rural Register and Almanac for 1874. 12mo. pamphlet. The Authors.
New England Historic Genealogical Society's Proceedings, for 1873. 8vo. pamphlet. The Society.
Clark, W. S. The Circulation of Sap in Plants. 8vo. pamphlet. The Author.

Eleventh Annual Report of the Massachusetts Agricultural College. 8vo. pamphlet. W. S. Clark, President.

Bulletin of the Bussey Institute. Parts 1, 2, and 3. 8vo. pamphlet. F. H. Appleton.

Second Annual Report of the Michigan State Pomological Society. 8vo. J. C. Holmes.

Transactions of the Essex Agricultural Society, for 1873. 8vo. pamphlet. J. D. W. French.

Fitz, James. The Southern Apple and Peach Culturist. 8vo. The Author.

Transactions of the Nebraska Horticultural Society, for 1871. Proceedings for 1872. Address by Dr. H. Latham, at the State Fair, 1872. Speech by J. S. Morton, at the State Fair, 1873. Address by Matilda Fletcher, to Farmers' Wives and Daughters, at the State Fair, 1873. 5 pamphlets. 8vo. D. H. Wheeler.

Report of the South Park Commissioners of Cook County, Illinois, for 1873. 8vo. pamphlet. H. W. S. Cleveland.

Transactions of the Wisconsin State Agricultural Society. Vols. 2, 3, 5, 7, 8, 9, 10, 11. 8 vols. 8vo. W. W. Field, Secretary.

Catalogue of Officers and Students of the State Agricultural College of Michigan. 8vo. pamphlet. W. H. Marston, Secretary.

Report of the State Agricultural Society of New Jersey, for 1873. 8vo. pamphlet. P. T. Quinn, Secretary.

Smith, John. Ferns, British and Foreign. 8vo. John Robinson.

Lidgate, J. N. Synopsis of Hawaiian Ferns. 8vo. pamphlet. John Robinson.

Irvin, Alexander. Illustrated Handbook of British Plants. 8vo. Charles E. Brown.

Flint, C. L., Secretary of the Board of Agriculture of Massachusetts. Report for 1873. 8vo. The Secretary.

Abstract from the returns of Agricultural Societies in Massachusetts, for 1846 and 1847. 2 pamphlets. 8vo. C. L. Flint.

Josselyn, John. New England's Rarities. With Introduction and Notes by Edward Tuckerman. 8vo. Prof. Russell's Bequest.

Bailey, J. W. Crystals in the Tissue of Plants. 8vo. pamphlet. Prof. Russell.

Porcher, F. A. Report on Manures. 8vo. pamphlet. Prof. Russell.

Report of the Fruit Growers' Association of Ontario, and of the Entomological Society, for 1873. 8vo. pamphlet. D. W. Beadle, Secretary.

Proceedings of the Western New York Horticultural Society, January, 1874. 8vo. pamphlet. P. Barry, President.

Proceedings of the American Antiquarian Society, No. 61. 8vo. pamphlet. The Secretary.

Transactions of the Rhode Island Society for the Encouragement of Domestic Industry, for 1873. 8vo. pamphlet. The Secretary.

Report of the Astor Library, New York, 1874. 8vo. pamphlet. The Librarian.

Report of the Connecticut State Board of Agriculture for 1873–4. 8vo. T. S. Gold, Secretary.

Report of the Commissioners of Pine Grove Cemetery, Lynn. 8vo. pamphlet. J. G. Barker, Superintendent.

Report of the Maine State Pomological Society for 1873. 8vo. G. B. Sawyer, Secretary.

Boston Society of Natural History: Proceedings, Vols. 8, 15, 16. 3 vols. 8vo. Memoirs, Vol. 2, Part 1, Nos. 1, 2, 3; Part 2, Nos. 1, 2, 3, 4; Part 3, Nos. 1 and 2. 9 pamphlets. 4to. The Society.

Report of the Board of Directors of Public Institutions of Boston for 1873–4. 8vo. pamphlet. The Department.

Reynolds, J. Essay on Manures. 8vo. pamphlet. The Author.

Transactions of the California State Agricultural Society, 1873. 8vo. pamphlet. The Secretary.

Report of the Maine Board of Agriculture for 1873–4. 8vo. S. L. Boardman, Secretary.

Wealth and Industry of Maine, by W. E. S. Whitman. 1873. 8vo. S. L. Boardman.

Report of the Curators of the University of Missouri. June, 1874. 8vo. pamphlet. G. C. Swallow.

Reports of the United States Commissioner of Agriculture for 1872 and 1873. 2 vols. 8vo. The Department.

Proceedings of the American Pomological Society, Fourteenth Session, 1873. 4to. pamphlet. Marshall P. Wilder, President.

Wilder, Marshall P. Lecture on the Importance, Progress, and Influence of Rural Pursuits. 8vo. pamphlet. The Author.

Darlington, William. Memorials of John Bartram and Humphrey Marshall, and their Botanical Contemporaries. 8vo. Thomas P. James.

James, T. P. An Obituary Notice of Dr. William Darlington. 8vo. pamphlet. The Author.

Sturtevant, E. L. A Lecture on the Typal Relations of Milk. 8vo. pamphlet. The Author.

Report of the Middlesex North Agricultural Society for 1873. 8vo. pamphlet. The Society.

Allan, J. T. Prize Essay on Forest Growing. 8vo pamphlet. The Author.

Public Library of Concord. Proceedings at the Dedication of the New Building. 8vo. pamphlet. The Librarian.

Transactions of the Worcester County Horticultural Society for 1873. 8vo. pamphlet. E. W. Lincoln, Secretary.

Constitution and By-Laws of the Maryland Horticultural Society. 8vo. pamphlet. T. C. Dorsey, Secretary.

Mann, B. P. Catalogue of the Phænogamous Plants of the United States, East of the Mississippi, etc. Second Edition. 8vo. pamphlet. The Author.

Report of the Ohio State Horticultural Society, for 1873. 8vo. pamphlet. M. B. Bateham, Secretary.

Massachusetts Agricultural Repository. Vols. 1—10. 9 vols. 8vo. Samuel J. Bridge.

Reports of the Illinois Industrial University, 1868—73. 6 pamphlets. 8vo. W. C. Flagg.

Transactions of the Illinois Horticultural Society. 1869—73, to complete the set. 5 vols. 8vo. W. C. Flagg.

PERIODICALS TAKEN.

ENGLISH. — Gardener's Magazine.
" Chronicle.
Journal of Horticulture and Cottage Gardener.
The Garden.
Curtis's Botanical Magazine.
Floral Magazine.
Florist and Pomologist.
Floral World.

ENGLISH. — Farmer's Magazine.
Country Gentleman's Magazine.
Journal of the Royal Agricultural Society.
FRENCH. — Révue Horticole.
BELGIAN. — Illustration Horticole.
Flore des Serres.
AMERICAN. — Gardener's Monthly.
Horticulturist.
California Horticulturist.
American Agriculturist.
Rural Californian.
American Farmer.
Ladies' Floral Cabinet.
Silliman's Journal.
American Naturalist.
Country Gentleman.
Rural New Yorker.
Massachusetts Ploughman.
Boston Cultivator.

PERIODICALS PRESENTED.

Journal of the New York State Agricultural Society.
New England Farmer.
Prairie Farmer.
Maine Farmer.
Canada Farmer.
Maryland Farmer.
Western Agriculturist.
Monthly Report of the Department of Agriculture.
Bulletin of the Essex Institute.
Bulletin of the Torrey Botanical Club.
Patent Right Gazette.
New York Semi-Weekly Tribune.
Rhode Island Press.
Boston Evening Transcript.
" Daily Globe.
Daily Evening Traveller.
Boston Morning Journal.
Saturday Evening Gazette.
The Nursery.

The Librarian takes the liberty to add the following remarks, which have occurred to him while drawing up the above list.

In the ten years last past, the books added have been nearly equal to the former number, while the real value has been more than doubled, by the acquisition of many large, rare, and costly works of reference, so nearly out of print as to be seldom obtainable. Some, indeed, we have never known offered except in cases made available to our advantage.

Among these may be mentioned such works as Sibthorp's Flora Græca, in 10 vols., folio, 1,000 plates; Flora Danica, 17 vols., folio, 3,000 plates; Roxburgh's Coromandel Plants, 3 vols., folio; Edward's Botanical Register, 34 vols., 8vo.; Sowerby's English Botany, in two editions; Loddiges' Cabinet; Andrews' Repository, and many others of great worth. The completion of the *one hundredth* volume of Curtis' Botanical Magazine during the past year, is worthy of mention. Our set of this work, perhaps the most valuable in the Library, is perfect from the commencement, and contains more than six thousand colored plates of plants.

By bequest and donation our library has been greatly enriched, and through much correspondence we have been enabled to obtain many missing volumes to aid in completing hitherto imperfect sets.

It is pleasant to note an increasing interest, especially in the department of botany. In this respect cryptogamic botany is prominent, while pomology and general horticulture have not been neglected; and yet I could wish our members to realize more fully the advantages this library affords.

TREASURER'S REPORT.

FOR THE YEAR 1874.

ITEMS OF INCOME.

Balance of Cash on hand,	$2,708 13
Received for Rent of Stores,	11,949 92
" " " Halls,	8,856 39
" " Admissions and Assessments,	1,744 00
" " Return premium on Insurance,	70 65
Gross Receipts of Annual Exhibition,	1,462 00
Balance unpaid on Prize account,	67 34
Received from Mount Auburn Cemetery,	5,313 81
	$32,172 24

ITEMS OF EXPENDITURE.

Salaries,	$1,975 00
Library Accessions,	997 44
Heating and Water, less paid by Tenants,	499 63
Stationery, Postage, and Printing,	1,270 89
Repairs on Building,	663 64
Gas,	1,117 19
New Furnace and Repairs on Heating Apparatus,	1,407 00
New Furniture and Repairs,	714 26
Expenses of Rose Show,	190 98
" " Annual Exhibition,	2,177 10
Taxes,	4,212 00
Interest,	3,742 53
Reduction of Mortgage Debt,	4,000 00
Attorney's Fees,	35 00
American Pomological Society, balance of profits of Exhibition in 1873,	109 84
Compensation of Editor,	1,000 00
Labor and Incidental Expenses,	1,955 04
Deposited to pay Prizes for 1874,	5,000 00
Balance to new Account,	1,104 70
	$32,172 24

As our additions and repairs to the building, furniture, and exhibition ware, will no more than replace the ordinary waste, we will fix the cost of our real and personal estate as

Building and Furniture,			$255,508 22
Exhibition Ware,			907 29
Library last year,	$12,513 16		
Added this year,	997 44		13,510 60
			$269,926 11
Add Bonds C. B. & Q. R. Road,			1,440 00
Total assets,			$271,366 11
Our Liabilities are :—			
Mortgage debt at 5½ per cent., payable Sept., 1883,	$66,000 00		
Loan without interest, payable to Harvard College in 1899,	12,000 00		
Total Liabilities,			$78,000 00
Balance of Assets over Liabilities,			$193,366 11

By the last Report our membership numbered,			1,032
Of these were Life Members,		560	
Added by Election,		15	
" " Commutation,		3	
		578	
Deceased,		9	
			569
Annual Members,		472	
Added,		22	
		494	
Deceased,	6		
Discontinued,	22		
Commuted,	3	31	463
			1,032

Income from the above :—		
15 Life,	$450 00	
22 Annual,	220 00	
3 Commutations,	60 00	
507 Subscriptions,	1,014 00	
		$1,744 00

This yearly exhibit shows that whatever we gain is by those who feel sufficient interest in the Society to take life membership.

In this connection, I would call attention to our photograph album, which is not yet full, and to the necessity of giving notice of any change in our list of members so as to render it as nearly correct as possible. I repeat the notice, to such as require it, that our rooms are open during all business hours for their full use.

In my estimate of the property of the Society no reference is made to the works of art, consisting of portraits and busts of our Presidents and benefactors, not easily valued intrinsically. Neither have I counted (except by the list of additions appended to the report of the committee) upon the increased and increasing value of our Library.

The "panic," which some of us remember too well as occurring occasionally, came upon us this year, and, as with individuals, so with us, it has interfered with income in various ways. While our halls retain their hold upon public favor, others of less value have sprung up around us; our receipts from membership are reduced, and Mount Auburn yields us but about half the amount of last year.

Our stores are occupied as at our last report.

Our building, however substantial, must needs, in the process of time, come to repairs. A stitch here and there has kept mechanics' bills within reasonable limits, although I could wish them less.

In the beginning, our method of heating was by four furnaces with sectional boilers, all of cast iron. These, never satisfactory in their operation, had become so impaired by use as to be untrustworthy for another season. I have, therefore, caused them to be displaced by a horizontal fire-box boiler, thirteen feet long, with seventy tubes, nine feet long, of two inch calibre, all of heavy boiler iron. Thus far, this proves quite satisfactory and gives promise of a saving in running expenses.

The printing of Part I. of our TRANSACTIONS, and the employment of an editor for it and our other publications, to prepare for the press the reports of the various committees, and in his leisure to write up the history of the Society, have added still further to our expenditures.

Owing to the circumstances mentioned, particularly to the diminished receipts from Mount Auburn, the surplus applicable to the reduction of our debt has not been as large as in some years,

but we trust that with the return of business prosperity our receipts may again be such as to enable us to devote a larger sum to that purpose, which we ever keep in view.

E. W. Buswell, *Treasurer.*

Boston, Jan. 7, 1875.

REPORT OF THE FINANCE COMMITTEE.

The Finance Committee have examined the accounts of the Treasurer, and find the same correct.

C. O. Whitmore,
H. H. Hunnewell,
B. P. Cheney,
} *Finance Committee.*

Jan. 7, 1875.

Dr. *Massachusetts Horticultural Society, in account with the Proprietors of the Cemetery of Mt. Auburn.* Cr.

For Sales and Improvements within the Cemetery, for the year ending December 31, 1874.

Cost of filling up and improving land at Mt. Auburn, unsalable or unfit for burial purposes, and for completing the fence around the Chant Lot, for the year ending Dec. 31, 1874, the Massachusetts Horticultural Society being charged with their proportion of the same.			By sales in January, 1874,		$1,551 00	
Completing the fence around Chant Lot,	$801 42		" " February, "		499 00	
Grading and filling Indian Ridge,	302 60		" " March, "		650 00	
" " " around Halcyon Lake,	1,096 12		" " April, "		3,855 00	
" " " " Marigold Path,	125 25		" " May, "		3,578 50	
" " " Falcon Avenue,	1,095 62		" " June, "		1,758 00	
" " " Swan, Eagle, and Circuit Avenues, on the Stone Farm,	2,071 37		" " July, "		4,464 00	
			" " August, "		3,170 00	
			" " September, "		1,125 00	
			" " October, "		2,998 75	
			" " November, "		2,165 00	
			" " December, "		2,333 35	
					$28,147 60	
One-quarter of	$5,492 38	$1,373 09	Deduct for annual expenses as per charter,		1,400 00	
Balance due Massachusetts Horticultural Society,		5,313 81	Mass. Horticultural Society, one-fourth part,		$26,747 60	6,686 90
		$6,686 90				$6,686 90

E. & O. E.

H. B. MACKINTOSH, *Treasurer.*

BOSTON, Dec. 31, 1874.

MASSACHUSETTS HORTICULTURAL SOCIETY,

To the Proprietors of the Cemetery of Mount Auburn, for the year 1874, *Dr.*

For one quarter part of the following expenditures: —

Completing the Fence around Chant Lot.

Oct. 13, 1874.

14 days moving, $28.00; carpenter work, $566.75,	$594 75	
Paints and oil, $135.80; painting, $63.00; labor, $7.87,	206 67	
		$801 42

Grading and filling on Indian Ridge.

Sept. 1.

86½ days labor,	$216 25	
157 loads gravel,	86 35	
		$302 60

Grading and filling around Halcyon Lake.

Oct. 31.

353¼ days men's labor,	$883 12	
106½ " horses' "	213 00	
		$1,096 12

Grading and filling on Marigold Path

Aug. 3.

7 days men's labor,	$17 50	
3 " horses' "	6 00	
185 loads gravel,	101 75	
		$125 25

Grading and filling Falcon Avenue.

Sept. 21.

381¼ days men's labor,	$953 12	
71¼ " horses' "	142 50	
		$1,095 62

Grading and filling Swan, Eagle, and Circuit Avenues, on the Stone Farm.

Nov. 30.

585¾ days men's labor,	$1,464 37	
303½ " horses' "	607 00	
		$2,071 37
E. & O. E.		$5,492 38

J. W. LOVERING, *Superintendent.*

MOUNT AUBURN, Dec. 31, 1874.

I certify the foregoing to be a true copy of account of improvements for the year 1874, rendered by the Superintendent.

H. B. MACKINTOSH, *Treasurer.*

Massachusetts Horticultural Society.

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H. WELD FULLER, of Boston.

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Corresponding Secretary.
EDWIN W. BUSWELL, of Boston.

Recording Secretary.
EDWARD S. RAND, Jr., of Boston.

Professor of Botany and Vegetable Physiology.
WILLIAM BOOTT, of Boston.

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JOHN G. BARKER, Chairman.

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GEORGE EVERETT.	WILLIAM H. HALLIDAY.	C. H. B. BRECK.

Vegetables.

CHARLES N. BRACKETT, Chairman.

GEORGE HILL.	GEORGE W. PIERCE.	JOSIAH CROSBY.
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WALTER RUSSELL.	GEORGE HILL.	FREDERICK CLAPP.
B. G. SMITH.	GEORGE W. PIERCE.	J. B. MOORE.

HONORARY MEMBERS.

A * denotes the member deceased.

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*John Quincy Adams, LL. D., late President of the United States.
*Prof. Louis Agassiz, Cambridge.
*William T. Aiton, late Curator of the Royal Gardens, Kew.
*Hon. Samuel Appleton, Boston.
*Hon. James Arnold, New Bedford.
*Edward N. Bancroft, M. D., late President of the Horticultural and Agricultural Society of Jamaica.
*Philip P. Barbour, Virginia.
*Robert Barclay.
*James Beekman, New York.
L'Abbé Berlèse, Paris.
*Nicholas Biddle, Philadelphia.
Dr. Jacob Bigelow, Boston.
*Mrs. Bigelow, Medford.
*Le Chevalier Soulange Bodin, late Secrétaire-Général de la Société d'Horticulture de Paris.
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*Hon. George N. Briggs, Pittsfield.
*Hon. James Buchanan, late President of the United States.
*Jesse Buel, late President of the Albany Horticultural Society.
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*Isaac Chauncy, U. S. Navy, Brooklyn, N. Y.
*Lewis Clapier, Philadelphia.
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*Admiral Sir Isaac Coffin, Bart., England.
*Zaccheus Collins, Philadelphia.
*William Coxe, Burlington, N. J.
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*Capt. Jesse D. Elliot, U. S. Navy.
*Hon. Stephen Elliot, LL. D., Charleston, S. C.
Charles A. Evanson, St. John, N. B.
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*Hon. Horace Everett, Vermont.
*F. Falderman, late Curator of the Imperial Botanic Garden, St. Petersburg.
*Hon. Millard Fillmore, late President of the United States,
*Dr. F. E. Fischer, late Professor of Botany of the Imperial Garden, St. Petersburg.
*Hon. Theodore Frelinghuysen, late President of the American Agricultural Society.
*Joseph Gales, Jr., Washington.
*George Gibbs, New York.
*Stephen Girard, Philadelphia.
*Hon. Robert H. Goldsborough, Talbot County, Maryland.
*Mrs. Rebecca Gore, Waltham.
John Greig, Geneva, N. Y.
Mrs. Mary Griffith, Charlies Hope, N. J.
*Gen. William Henry Harrison, late President of the United States.
*S. P. Hildreth, M. D., Marietta, O.
Thomas Hopkirk, President of the Glasgow Horticultural Society.
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Lewis Hunts, Huntsburg, O.
*Joseph R. Ingersoll, Philadelphia.
*Gen. Andrew Jackson, late President of the United States.
*Mrs. Martha Johonnot, Salem.
Jared Potter Kirtland, LL. D., Cleveland, O.
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Le Comte de Lasteyrie, Vice-Président de la Société d'Horticulture de Paris.
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*Joshua Longstreth, Philadelphia.
*Nicholas Longworth, Cincinnati.
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*Hon. Theodore Lyman, Brookline.

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*Samuel L. Mitchell, LL. D., New York.
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A. W. Moria, Montreal.
—— Mosselman, Antwerp.
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*John H. Powell, Powellton, Pa.
*Henry Pratt, Philadelphia.
*William Prince, Flushing, N. Y.
Rev. George Putnam, D.D., Roxbury.
*Archibald John, Earl of Roseberry, late President of the Caledonian Horticultural Society.
*Joseph Sabine, late Secretary of the London Horticultural Society.
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Henry Winthrop Sargent, Fishkill, N. Y.
*Sir Walter Scott.
*William Shaw, New York.
*John Shepherd, Curator of the Botanic Garden, Liverpool.
*John S. Skinner, Baltimore.
G. W. Smith.
*Stephen H. Smith, late President of the Rhode Island Horticultural Society.
*Judge Strong, Rochester.
*Hon. Charles Sumner, Boston.
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John J. Thomas, Union Springs, N. Y.
*Grant Thorburn, New York.
*M. Du Petit Thouars, Paris, late Professor of the Institut Horticole de Fromont.
*Hericart de Thury, Le Vicomte, late Président de la Société d'Horticulture de Paris.

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*Frederick Walcott, Litchfield, Conn.
*Nathaniel Wallich, M. D., late Curator of the Botanic Garden, Calcutta.
*Malthus A. Ward, late Professor in Franklin College, Athens, Ga.
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*Hon. John Welles, Boston.
Ashton Yates, Liverpool.

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A * denotes the member deceased.

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A. B. Allen, New York.
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Don Francisco Aquilar, of Maldonado, in the Banda Oriental.
Thomas Aspinwall, late Liverpool; now Brookline.
P. M. Augur, State Pomologist, Middlefield, Conn.
Patrick Barry, Chairman of the General Fruit Committee of the American Pomological Society, Rochester, N. Y.
Augustin Baumann, Bolwiller, France.
Eugéne Achille Baumann, Bolwiller, France.
Joseph Bernard Baumann, Bolwiller, France.
Napoléon Baumann, Bolwiller, France.
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W. J. Beal, Lansing, Michigan.
*Noel J. Becar, Brooklyn, N. Y.
*Edward Beck, Worton College, Isleworth, near London.
Rev. Henry Ward Beecher, Brooklyn, N. Y.
Louis Edouard Berckmans, Rome, Ga.
Prosper J. Berckmans, Augusta, Ga.
*Alexandre Bivort, late Secrétaire Général de la Société de Van Mons. Fleurus, Belgique.
Mons. Tripet le Blanc, Paris.
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John W. Brown, Fort Gaines, Ga.
Dr. Nehemiah Brush, East Florida.
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James Deering, Portland, Me.
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Charles Downing, Newburg, N. Y.
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W. C. Flagg, Ex-President of the Illinois State Horticultural Society, Moro, Ill.
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*Hon. Russell Freeman, Sandwich.
Andrew S. Fuller, Ridgewood, N. J.
Henry Weld Fuller, Roxbury.
R. W. Furnas, Ex-President of the Nebraska State Horticultural Society, Brownsville, Neb.
Augustus Gande, President of the Horticultural Society, Department of Sarthe.
*Robert H. Gardiner, Gardiner, Me.
*Benjamin Gardner, late U. S. Consul at Palermo.
*Capt. James P. Gerry, U. S. Navy.
*Abraham P. Gibson, St. Petersburg.
*R. Glendenning, Chiswick, near London.
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*Abraham Halsey, New York.

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*T. W. Harris, M. D., Cambridge.
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Bernard Henry, Philadelphia.
Shirley Hibberd, Editor of the Gardener's Magazine, London.
I. I. Hitchcock, Baltimore.
Robert Hogg, LL. D., Editor of the Journal of Horticulture, London.
*Thomas Hogg, New York.
Thomas Hogg, New York.
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Fisher Holmes.
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Isaac Hunter, Baltimore.
George Husmann, St. Louis, Mo.
Thomas P. James, Cambridge.
Edward Jarvis, M. D., Dorchester.
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Samuel Kneeland, M. D., Boston.
Mons. Laffay, Bellevue, near Paris, France.
David Landreth, Ex-Corresponding Secretary of the Pennsylvania Horticultural Society, Bristol, Pa.
C. C. Langdon, Mobile, Alabama.
Dr. William Le Baron, State Entomologist, Geneva, Ill.
G. F. B. Leighton, President of the Norfolk Horticultural and Pomological Society, Norfolk, Va.
*E. S. H. Leonard, M. D., Providence.
André Leroy, Author of the Dictionnaire de Pomologie, Angers, France.
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*Allen Melville, New York.
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J. E. Mitchell, Philadelphia.
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*John Parker, Amsterdam.
*Andrew Parmentier, Brooklyn, N. Y.
William Paul, Waltham Cross, London, N.
*Sir Joseph Paxton, M. P., Chatsworth, England.
*John L. Payson, U. S. Consul, Leghorn.
*Com. M. C. Perry, U. S. Navy.
*David Porter, Chargé d'Affaires of the U. S., at the Ottoman Porte.
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*William R. Prince, Flushing, N. Y.
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*William Foster Redding, Baltimore.
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*Rev. John Lewis Russell, Salem.
William Saunders, Department of Agriculture, Washington, D. C.
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William Shaw, New York.
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*Judge Strong, Rochester, N. Y.

*James P. Sturgis, Canton.
William Summer, Pomaria, S. C.
Francis Summerest.
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*J. E. Teschemacher, Boston.
*Robert Thompson, London.
*George C Thorburn, New York.
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John Tillson, Jr., Illinois.
Prof. Todaro, Director of the Botanical Garden at Palermo.
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Louis Van Houtte, Ghent, Belgium.
*M. Vattemare, Paris.
Mons. Emilien de Wael, Antwerp, Belgium
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Anthony Waterer, Knapp Hill, near Woking, Surrey, England.
J. Ambrose Wight, Editor of the Prairie Farmer, Chicago, Ill.
Benjamin Samuel Williams, Holloway, London, N.
Prof. John Wilson, Agricultural College, Cirencester, England.
*William Wilson, New York.
J. F. Wingate, Bath, Me.
Joshua Wingate, Portland.
Joseph A. Winthrop, South Carolina.

MEMBERS FOR LIFE.

Change of residence, or any inaccuracies, should be promptly reported to the Secretary.

Adams, George E.,	Medford.	Bartlett, E.,	Newburyport.
Albro Charles,	Taunton.	Bates, Amos,	Hingham.
Alger, R. F.,	Dedham.	Bates, Caleb,	Kingston.
Allen, John Fisk,	Salem.	Bayley, John P.,	Boston.
Ames, F. L.,	Easton.	Beal, Alexander,	Dorchester.
Ames, F. M.,	Canton.	Beebe, James M.,	Boston.
Ames, George,	Boston.	Bell, Joseph H.,	Phila., Pa.
Ames, P. A.,	"	Bemis, Emery,	Cambridge.
Amory, Charles,	"	Berry, James,	Boston.
Amory, Frederick,	Brookline.	Bickford, Weare D.,	Brighton.
Amory, James S.,	Boston.	Birchard, Charles,	Arlington.
Andrews, Charles L.,	Swampscott.	Black, J. W.,	Boston.
Andrews, Frank W.,	Boston.	Blagg, Samuel,	Newbern, N. C.
Andrews, W. T.,	"	Blake, George B.,	Brookline.
Andros, Milton,	Brookline.	Blanchard, J. W. Jr.,	Boston.
Appleton, Edward,	Reading.	Blaney Henry,	Brookline.
Appleton, Francis H.,	West Peabody.	Blinn, R. D.,	Lexington.
Appleton, Wm. S.,	Boston.	Bocher, F.,	Boston.
Atkins, Elisha,	Belmont.	Bockus, C. E.,	Dorchester.
Austin, William R.,	Dorchester.	Bond, George W.,	Boston.
Avery, Edward,	Boston.	Borland, J. N.	"
Ayer, Adams,	"	Bonvé, Thomas T.,	"
Ayling, Isaac,	"	Bowditch, A. C.,	Somerville.
		Bowditch, J. Ingersoll	Boston.
Bacon, George,	Brookline.	Botume, John,	Stoneham.
Bailey, Edwin C.,	Boston.	Brackett, C. N.,	Newton.
Baker, Wm. E.,	"	Bradish, L. J.,	Boston.
Banfield, F. L.,	"	Bragg, S. A. B.,	Mattapan.
Barnard, Rev. C. F.,	"	Breed, Andrews,	Lynn.
Barnard, James M.,	"	Breed, Henry A.,	"
Barnes, Walter S.,	Somerville.	Bresee, Albert,	Hortonville, Vt.
Barnes, Wm. H.,	Boston.	Brewer, John Reed,	Boston.
Barney, Levi C.,	"	Brewer, Otis,	"
Barratt, James,	Cambridge.	Brigham, W. T.,	"
Barrett, Aaron,	Malden.	Bright, Jona. B.,	Waltham.
Barrows, Thomas,	Dedham.	Bright, William E.,	"

Brimmer, Martin,	Boston.	Clapp, Lemuel,	Dorchester.
Brintnall, Benj.,	"	Clapp, Wm. C.,	"
Brown, Charles E.,	Yarmouth, N.S.	Clark, Orus,	Boston.
Brown, Edward J.,	Brookline.	Clark, W. L.,	Neponset.
Brown, George B.,	Boston.	Clark, Wm. S.,	Amherst.
Brownell, E. S.,	Essex June., Vt.	Clarke, Miss Cora H.,	Jamaica Plain.
Brooks, Francis,	Medford.	Clay, Henry,	Dorchester.
Brooks, J. W.,	Milton.	Cleary, Lawrence,	West Roxbury.
Brooks, Peter C.,	Boston.	Clement, Asa,	Dracut.
Bruce, N. F.,	Stoneham.	Cleveland, Ira,	Dedham.
Buckminster, W. J.,	Malden.	Cobb, Albert A. C.,	Brookline.
Bullard, Wm. S.,	Boston.	Coburn, Isaac E.,	Everett.
Burnham, T. O. H.P.,	"	Codman, James M.,	Brookline.
Burnett, Joseph,	Southborough.	Codman, Ogden,	Lincoln.
Burr, Fearing,	Hingham.	Coffin, G. Winthrop,	West Roxbury.
Burr, Matthew H.,	"	Coffin, Wm. E.,	Boston.
Buswell, E. W.,	Boston.	Comer, G. N.,	Dedham.
Buswell, Mrs. E. W.,	"	Converse, E. S.,	Malden.
Buswell, Frank E.,	"	Coolidge, Joshua,	Watertown.
Butler, Aaron, Jr.,	Wakefield.	Copeland, Franklin,	West Dedham.
Butterfield, Wm. P.,	Arlington.	Cormerais, Henry,	Dedham.
		Courtis, William,	Lawrence.
Cadness, John,	Flushing, N.Y.	Craft, George,	Brookline.
Cains, William,	South Boston.	Crocker, Uriel,	Boston.
Calder, A. P.,	Boston.	Crosby, Josiah,	Arlington.
Capen, John,	"	Crowell, Philander,	Chelsea.
Carlton, Samuel A.,	Somerville.	Crowell, R. H.,	"
Carruth, Charles,	Boston.	Cox, George P.,	Malden.
Carruth, Nathan,	Dorchester.	Coy, Samuel I.,	Boston.
Carter, Miss Sabra,	Wilmington.	Cruickshanks, James,	Chelsea.
Chamberlain, C. W.,	Arlington.	Cummings, John,	Woburn.
Chandler, J. G.,	So. Lancaster.	Curtis, Chas. F.,	West Roxbury.
Chapin, N. G.,	Brookline.	Curtis, George S.,	Jamaica Plain.
Chapman, Edward,	Arlington.	Cushing, J. G.,	Boston.
Chase, A. J.,	Lynn.	Cushing, R. M.,	"
Chase, Daniel E.,	Somerville.		
Chase, Hezkiah S.,	South Boston.	Daggett, H. L.,	Boston.
Chase, William M.,	Worcester.	Damon, Samuel G.,	Arlington.
Cheney, B. P.,	Boston.	Dana, Charles B.,	Brookline.
Child, F. J.,	Cambridge.	Darling, Charles K.,	Boston.
Child, Wm. C.,	Medford.	Davenport, Edward,	Dorchester.
Childs, Francis,	Charlestown.	Davenport, Henry,	Boston.
Childs, N. R.,	Dorchester.	Davis, Curtis,	Cambridge.
Claflin, Henry,	Brighton.	Davis, Hervey,	Cambridgeport
Claflin, Wm.,	Newton.	Dawson, Jackson,	West Roxbury.
Clap, E. W.,	Walpole,	Deblois, S. G.,	Boston.
Clapp, Frederick,	Dorchester.	Denny, C. H.,	"

Denny, R. S., Dorchester.
Denton, Eben, Braintree.
DeWolf, John L., Boston.
Dewson, F. A , "
Dexter, F. Gordon, "
Dickerman, Geo. H., Somerville.
Dickinson, Alex., Cambridgeport
Dike, Charles C., Stoneham.
Dix, Joseph, Boston.
Dorr, George, Dorchester.
Dove, Geo. W. W., Andover.
Downer, Samuel, Dorchester.
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Durant, William, "
Durfee, Mrs. F. B., Fall River,
Durfee, George B. "
Durfee, Nathan, "
Dyer, N. N., So. Abington.

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Everett, Otis, Boston.
Everett, William, "

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Fenno, Joseph H., Revere.
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Fisher, James, Boston.
Fisher, Warren, "
Flagg, Augustus, "
Fleming, Edwin, West Newton.
Fleming, William, "
Fletcher, J. W., Chelsea.
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Flint, D. B., Watertown.
Flynt, William N., Monson.
Foster, John H., Boston.
Foster, J. W., Dorchester.
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French Jonathan, Boston.
French, J. D. W., "
Fuller, Henry Weld, "

Galvin, John, West Roxbury.
Gardner, Henry N., Belmont.
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Gilkey, R. F., Watertown.
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Gilson, F. Howard, Somerville.
Glover, Albert, Boston.
Glover, Joseph B. "
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Goddard, Mrs. M. T., Newton.
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Gould, Samuel, Boston.
Gray, James, Wellesley.
Gregory, J. J. H., Marblehead.
Greig, George, Newton.
Grinnell, Joseph, New Bedford.
Groom, Thomas, Dorchester.
Grundell, H., "
Guild, J. Anson, Brookline.

Hall, Edwin A., Cambridgeport
Hall, George A., Chelsea.
Hall, George R., Boston.
Hall, John R., "
Hall, Stephen A., Revere.
Hall, William F., Brookline.
Halliday, W. H., Boston.
Hammond, Gard. G., "
Hammond, Samuel, "
Harding, C. L., Cambridge.
Harding, G. W., Dorchester.
Harding, L. B., Boston.
Harding, W. C., "
Hardy, F. D., Jr., Cambridgeport
Harris, Charles, Cambridge,
Hastings, Edm. T., Boston.
Hathaway, Seth W., Marblehead.
Hatch, Anthony, Cliftondale.
Haughton, James, Boston,

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Hill, John, Stoneham.
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Hooper, Robert C., Boston.
Hooper, Thomas, Bridgewater.
Horner, Mrs. C. N. S., Georgetown.
Hovey, C. H., Cambridge.
Hovey, C. M., "
Hovey, John C., Cambridgeport
Hovey, P. B., "
Howard, Joseph W., South Boston.
Howe, George, Boston.
Howland, John, Jr., New Bedford.
Hubbard, Charles T., Boston.
Hubbard, G. G., Cambridge.
Hubbard, J. C., Boston.
Hubbard, W. J., "
Huckins, J. W., "
Humphrey, F. J., Dorchester.
Hunneman, Jos. H., Boston.
Hunnewell, H. H. Wellesley.
Hunt, Franklin, Boston.
Hunt, Moses. "
Hyde, J. F. C., Newton.

Inches, Henderson, Boston.
Inches, Herman B., "

Jackson, Abraham, Boston.
Janvrin, W. S., Revere.
Jeffries, John, Jr., Boston.
Jenks, C. W., "
Joyce, Mrs. Samuel, Medford.

Kakas, Edward, Medford.
Kelley, E. G., Newburyport.
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Kennedy, G. G., Boston.
Kenney, John M., Wareham.
Kent, John, Charlestown.
Keyes, E. W., "
Keyes, George, Concord.
Kidder, H. P., Boston.
Kimball, A. P., "
King, Franklin, Dorchester.
King, William S., Boston.
Kingman, A. A., Brookline.
Kingman, C. D., Middleborough
Kinsley, Lyman, Cambridgeport
Kittredge, E. A., Boston.

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Lamb, William, "
Lancaster, C. B., Newton.
Lawrence, Amos A., Brookline.
Lawrence, Edward, Charlestown.
Lawrence, James, Boston.
Lawrence, John, "
Lawson, Peter, Lowell.
Leavens, S. Davis, Boston.
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Leuchars, R. B., Boston.
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Lincoln, D. Waldo, Worcester.
Lincoln, George, Hingham.
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Lord, George C., Newton.
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Loring, C. W., Boston.
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Lovett, G. L., Boston.
Low, Ariel, "
Lowder, John, Watertown.
Lowell, Augustus, Boston.
Luke, Elijah H., Cambridgeport
Lunt, C. H., Jamaica Plain.
Lyman, Theodore, Brookline.
Lyon, Henry, Charlestown.

Mahoney, John, Boston.
Maloon, William, Salem.

Mann, James T.,	Cambridge.	Packer, C. H.,	Boston.
Mann, Jonathan,	Cambridge.	Page, Thomas,	Milwaukee.
Manning, J. W.,	Reading.	Paine, Robert T.,	Boston.
Manning, Mrs. L. B.,	Reading.	Palmer, J. P.,	"
Manning, Robert,	Salem.	Park, J. C.,	Somerville.
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Marsh, Francis,	Dedham.	Parker, William A.,	"
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Martin, D. A.,	Chelsea.	Partridge, Henry,	Boston.
Martin, J. S.,	Boston.	Partridge, Horace,	Somerville.
Matthews, Nathan,	"	Pearce, John,	West Roxbury.
McCarthy, T.,	"	Peck, O. H.,	Franklin.
McClure, John,	Revere.	Peck, W. G.,	Arlington.
Merriam, M. H.,	Lexington.	Penniman, A. P.,	Waltham.
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Miller, E. D.,	Dorchester.	Perkins, William P.,	"
Millmore, M.,	oston.	Perry, George W.,	Malden.
Mills, Charles H.,	"	Philbrick, William D.,	Newton Centre.
Milton, W. H.,	"	Pierce, George W.,	Everett.
Minott, Charles,	Somerville.	Pierce, Henry L.,	Dorchester.
Minton, James,	Dorchester.	Pierce, S. B.,	"
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Morse, S. B.,	"	Potter, Joseph S.,	Arlington.
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Newhall, Josiah,	Lynnfield.	Proctor, Thos. P.,	West Roxbury.
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Ross, Henry,	Newton.	Stetson, James A.,	Quincy.
Ross, M. D.,	Boston.	Stetson, Nahum,	Bridgewater.
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Shimmin, Charles F.,	Boston.	Thorndike, John H.,	Boston.
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Skinner, Francis,	Boston.	Todd, John,	Hingham.
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Slack, Lewis,	Brookline.	Torrey, Everett,	Charlestown.
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Smith, Charles A.,	Boston.	Turner, J. M.,	Dorchester.
Smith, Charles H.	Jamaica Plain.	Turner, R. W.,	Newton.
Smith, Chauncey,	Cambridge.	Turner, Royal W.,	Randolph.
Smith, E. N.,	Boston.		
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Smith, James H.,	Needham.	Upham, Henry,	Brookline.
Smith, Joshua B.,	Cambridgeport		
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		White, Francis A.,	Brookline.
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Wainwright, Wm. L.,	Braintree.	Whiting, Nathaniel,	Brookline.
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Walker, T. W.,	Waltham.	Wilbur, G. B.,	Watertown.
Ward, John,	Newton.	Wilcutt, Levi L.,	West Roxbury.
Wardwell, W. H.,	Newton Centre.	Wilder, Henry A.,	Boston.
Ware, Benjamin P.,	Marblehead.	Wilder, Marshall P.,	Dorchester.
Warren, G. W.,	Boston.	Williams, Aaron D.,	Boston.
Wason, E.,	Brookline.	Williams, Benj. B.,	"
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Weld, M. W., Dr.,	Boston.	Winship, Herman,	"
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Weld, W. G.,	Brookline.	Woerd, C. V., Jr.,	"
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Wheelwright, A. C.,	"	Woodward, Royal,	Brookline.
Whipple, John A.,	"	Wright, George C.	West Acton.
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Allen, Frederick D.,	"
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Bowditch, Azell,	"
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Breck, C. H. B.,	"
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Clay, Edward C.,	Malden.	Eaton, Russell P.,	Dorchester.
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Cobb, Jonathan H.,	Dedham.	Edmands, J. W.,	Newton.
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Converse, Parker L.,	"		
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Curtis, D. T.,	Boston.	Felton, A. W.,	West Newton.
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Davis, Barnabas,	"	French, W. E.,	"
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Davis, Fred'k.,	Newton.	Frost, George,	West Newton.
Davis, Miss M. E.,	E. Somerville.	Frost, Rufus S.,	Chelsea.
Davis, Thomas M.,	Cambridgeport.	Frost, Stiles,	West Newton.
Davis, W. H.	Milton.	Frothingham, I. H.,	Dorchester.

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Gage, Edmund,	Bradford.	Hayward, James T.,	Boston.
Gage, Edwin V.,	"	Hazelton, H. L.,	"
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Gardner, John,	Dedham.	Heustis, Warren,	Belmont.
Garfield, Charles,	Medford.	Hews, Albert H.,	No. Cambridge
Gaut, S. N.,	Somerville.	Higbee, C. H.,	Salem.
Gay, Samuel S.,	Boston.	Hill, Benj. D.,	Peabody.
Gay, Timothy,	Chelsea.	Hill, Henry Y.,	Belmont.
Gerry, Charles F.,	Hyde Park.	Hillard, George S.,	Boston.
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Gilbert, John,	"	Hollis, Thomas,	"
Gilbert, Samuel,	"	Holmes, G. W.,	"
Gilbert, W. A.,	Neponset.	Horne, C. F.,	Watertown.
Gill, Mrs. E. M.,	Medford.	Howe, Estes,	Cambridge.
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Gray, Wm., Jr.,	Dorchester.	Jameson, G. W.,	Lexington.
Greene, Franklin,	Jamaica Plain.	Johnson, H. A.,	Jamaica Plain.
Greenwood, E. H.,	Newton Centre	Jones, George H.,	Newton.
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Hadley, T. B.,	Stoneham.	Keith, W. W.,	Boston.
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Lothrop, Thornton K.	Boston.	Odiorne, F. H.,	Malden.
Low, John J.,	"	Oldreive, Richard,	Newton.
Lowell, John,	Newton.	Olney, Richard,	West Roxbury.
		Owen, John,	Cambridge.
Markoe, G. F. H.,	Boston.		
May, F. W. G.,	"	Page, Edward,	Boston.
McDermott, Andrew,	"	Paine, Benjamin F.,	"
McGee, James B.,	Peabody.	Palmer, Stevens G.,	"
McIntire, Joseph,	Melrose.	Parker, Chas. E.,	Auburndale.
McIntyre, James,	Malden.	Parker, Harvey D.,	Boston.
McLaren, Anthony,	Forest Hills.	Parker, James M.,	Charlestown.
McTear, James,	Boston.	Parker, John,	Boston.
Meisel, A.,	"	Parker, Nelson,	Stoneham.
Mellen, George M.,	Brookline.	Parsons, William,	Boston.
Merriam, Galen,	West Newton.	Parsons, William B.,	Rockport.
Merriam, Herbert,	Weston.	Patterson, James,	Cambridge.
Merrick, John M.,	Walpole.	Payson, Samuel R.,	Boston.
Merrill, J. Warren,	Cambridgeport	Perkins, S. C.,	Dorchester.
Merrill, S. A.,	Danvers.	Perkins, T. Henry,	Cohasset.
Metcalf, Albert,	Boston.	Pettingill, Thos. S.,	Brookline.
Millar, John L.,	"	Pfenninger, J.,	Grantville.
Miller, David S.,	"	Philbrick, Edward S.,	Boston.
Miller, William,	East Boston.	Phillips, Nathaniel,	Dorchester.
Mills, John F.,	Boston.	Phipps, Samuel, Jr.,	Boston.
Mills, William,	Somerville.	Pillsbury, H. H.,	Medford.
Minot, G. R.,	Boston.	Plimpton, W. P.,	West Newton.
Minot, William, Jr.,	"	Power, Charles J.,	S. Framingham.
Minton, P. J.,	Forest Hills.	Pratt, L. G.,	West Newton.
M'Intosh, A. S.,	Boston.	Pratt, Samuel,	Chelsea.
Morandi, Francis,	Malden.	Preston, Jonathan,	Boston.
Morris, Thomas D.,	Boston.	Prince, F. O.,	Winchester.
Morrison, Benj. F.,	Medford.	Putnam, C. A.,	Salem.
Morse, E. R.,	Somerville.	Putnam, Francis,	"

Putnam, B. W.,	Jamaica Plain.	Starbird, Louis D.,	Malden.
		Stearns, Charles,	Brookline.
Rand, George C.,	Newton Centre	Stevens, E. C.,	Cambridge.
Randall, Macey,	Sharon.	Stone, Eliphalet,	Dedham.
Ranlett, Charles A.,	Billerica.	Story, Miss Sarah W.,	Brighton.
Ranlett, S. A.,	Melrose.	Sullivan, J. L. D.,	Somerville.
Rawson, W. W.,	Arlington.		
Ray, Edwin,	Boston.	Tailby, Joseph,	Wellesley.
Reed, E. V. R.,	Milton.	Tainter, A. E.,	Medford.
Rice, Edward E.,	Dorchester.	Talbot, Josiah W.,	So. Dedham.
Rice, George W.,	Boston.	Talbot, W. H.,	Boston.
Richards, Francis,	"	Tapper, Thomas,	Canton.
Richards, John S.,	Brookline.	Taylor, Moses,	Acton.
Richardson, E. P.,	Lawrence.	Thatcher, L. P.,	Middleboro.
Richardson, Horace,	Framingham.	Thompson, G. M.,	Waltham.
Rinn, J. B.,	Malden.	Tobey, Miss M. B.,	Brookline.
Roberts, Edward,	Hyde Park.	Todd, Jacob,	Boston.
Rogers, John F.,	Cambridge.	Tolman, Miss H. S.,	"
Ruggles, John,	Brighton.	Torrey, Augustus.	Beverly.
Russell, Geo., M. D.,	Boston.	Tower, Elisha,	Lexington.
Russell, Joseph M.,	Malden.	Train, Gorham,	Dorchester.
		Trautman, Martin,	Boston.
Sands, Edward,	Boston.	Tucker, E. G.,	"
Sargent, Wingate P.,	Melrose.	Tufts, James W.,	Medford.
Saville, George,	Quincy.	Turner, N. W.,	Everett.
Sawtell, J. M.,	Fitchburg.	Tuttle, Samuel J.,	Boston.
Schlegel, Adam,	Boston.		
Scott, A. E.,	Lexington.	Underwood, Wm. J.,	Belmont.
Scott, George H.,	Brighton.		
Shattuck, F. R.,	Boston.	Vandine, Henry,	Cambridgeport
Shaughnessy, J. J..	"	Van Voorhies, H. W.,	Everett.
Shedd, Abraham B.,	Lexington.	Vinton, Mrs. C. A.,	Boston.
Shedd, Arthur B.,	"	Vinton, Miss Mary P.,	"
Shepherd, C. W.,	West Newton.		
Sherman, Japhet,	Medford,	Walker, Charles H.,	Chelsea.
Simpson, Michael H.,	Saxonville.	Walker, Joseph T.,	Boston.
Sleeper, J. S.,	Boston.	Walker, Wm. P.,	Somerville.
Smallwood, Thomas,	Newton.	Wallis, M. L.,	West Roxbury.
Smith, Edmund,	Cambridge.	Wallis, William,	Boston.
Smith, Thomas H.,	Boston.	Walsh, M. H.,	Brighton.
Snow, E. A.,	Melrose.	Waltham, George,	Nahant.
Southworth, Edward,	Quincy.	Ward, Edward A.,	Cambridge.
Spencer, A. W.,	Dorchester.	Warren, Samuel D.,	Waltham.
Spooner W. H.,	West Roxbury.	Warren, Washington,	Newton.
Sprague, Charles J.,	Boston.	Washburn, Alex. C.,	Boston.
Squires, J. P.,	Arlington.	Washburn, E. F.,	Neponset.
Stanwood, E. How'd,	Grantville.	Washburn, G. W. C.,	Boston.

Watson, David,	Malden.	Williams, H. W.,	Boston.
Webster, J. R.,M.D.,	Milton.	Williams, Stephen,	"
Webster, John,	Salem.	Wilmarth, H. D.,	Jamaica Plain.
Wellington, Chas.A.,	E. Lexington.	Wilson, B. O.,	Watertown.
Wellington, Jos. V.,	Cambridge.	Wilson, Geo. W.,	Malden.
Wells, Benjamin T.,	Boston.	Wiswall, Artemas,	Newton.
Westgate, J. E.,	Melrose.	Wiswall, Henry M.,	Watertown.
Wetherell, Chas. M.,	Ware.	Wood, Mrs. Anna D.,	West Newton.
Wetherell, John G.,	Boston.	Wood, Miss C. S.,	"
Wheatland, Henry,	Salem.	Wood, Edmund M.,	Boston.
Wheeler,Miss Ann C.,	Cambridgeport	Wood, E. W.,	West Newton.
Wheildon, Wm. W.,	Concord.	Wood, Wm. K.,	"
White, N. B.	Norwood.	Woodbury, Chas.,	Beverly.
White, T. C.,	Charlestown.	Woodford, Jos. H.,	Newton.
Whitney, Joel,	Winchester.		
Wilcox, Wm. H.,	Reading.	Young, Thos. Jr.,	Somerville.
Wilder, Chas. T.,	Grantville.	Young, William,	Fall River.
Wilkins, C. W.,	Boston.		
Williams, Dudley,	Jamaica Plain.	Zirngiebel, D.,	Needham.
Williams, Elijah,	Boston.		

EXTRACTS FROM THE BY-LAWS.

SECTION XXV.—Life Members.

The payment of thirty dollars shall constitute a Life Membership, and exempt the member from all future assessments; and any member, having once paid an admission fee, may become a Life Member by the payment of twenty dollars in addition thereto.

SECTION XXVI.—Admission Fee and Annual Assessment.

Every subscription member, before he receives his Diploma, or exercises the privileges of a member, shall pay the sum of ten dollars as an admission fee, and shall be subject afterwards to an annual assessment of two dollars.

SECTION XXVIII.—Discontinuance of Membership.

Any member who shall neglect for the space of two years to pay his annual assessment shall cease to be a member of the Society; and the Treasurer shall erase his name from the List of Members.

The attention of Annual Members is directed to Section XXVIII above.

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TRANSACTIONS

OF THE

Massachusetts Horticultural Society,

FOR THE YEAR 1875.

PART I.

BOSTON:
TOLMAN & WHITE, PRINTERS, 383 WASHINGTON STREET.
1875.

TRANSACTIONS

OF THE

Massachusetts Horticultural Society.

BUSINESS MEETING.

Saturday, January 2, 1875.

A stated meeting of the Society was holden at 11 o'clock, according to notification.

The meeting was called to order by William C. Strong, the retiring President, who reviewed the progress of the Society for the past four years, in the following address:

Address of President William C. Strong.

Members of the Society: —

I cannot leave the position, which by your kindness I have occupied for the past four years, without expressing my deep sense of gratitude for the honor of this relation and for the entire harmony and uniform courtesy which have characterized our proceedings, and which have combined to render the duties of presiding officer both easy and agreeable.

During this time we have witnessed no marked events, no great changes in our history. Like Nature's type, ours has been a uniform, imperceptible, but constant, and consequently we may believe a most healthy growth.

In the course of nature, we have lost several esteemed and active members, of whose memory we have made suitable record,

in our published transactions. But notwithstanding this loss our roll of membership is steadily increasing. Our Library has not only been increased by valuable and costly additions, but is also coming into more general use and is attaining recognition as a valuable privilege of membership. Our exhibitions have been vigorous and well-sustained, and the exhaustion of the largely increased appropriations for prizes indicates a constant growth in this direction. The novel exhibition of Rhododendrons on the Common and also the reception of the National Pomological Society in the year 1873, had an undoubted tendency to extend our influence both at home and abroad.

As a natural sport from the normal type of growth, in our work, we may mark, as most noticeable, the establishment of a standing Committee on Discussions and Publications, and also of an Editor's chair. Here, in my judgment, we have entered upon a rich and most promising field. Here we may with reason expect to bring to light and record the various experience of our skilful cultivators in all departments of our art. But beyond this we surely ought to aim to make this the channel for the publication of the investigations and discoveries of men of science, in all matters pertaining to horticulture, botany, and vegetable physiology. In no other way can the society so widely and so permanently increase its influence and its usefulness as by encouraging investigation and stimulating the talent within its ranks. We must not be discouraged if the immediate returns are meagre. The field must be ploughed and enriched, but rest assured the harvest will be an hundred fold. I deem it fortunate that we have secured for the office of editor one who inherits a fitness for his work and who, in the first volume of our published discussions, has given auspicious proof that the work is well begun. Shall we not individually pledge ourselves each to promote this endeavor and so insure the result that all our members shall esteem it an honor and a privilege to be enrolled on our list.

In this connection, you will allow me to suggest the desirability of bringing our entire membership together on some stated occasions, for the purpose of unifying and vivifying the society as a distinct organization. This might be accomplished by an annual festival in our own home, the members being admitted by tickets placed at such a moderate price as would be within the reach of all. The older members, who are present, will recall the notable triennial

festivals held in Faneuil Hall and elsewhere, at which the whole membership and distinguished invited guests were accustomed to assemble. We might make in our new place a more modest yearly harvest-home gathering, which would in an eminent degree conduce to good fellowship and to awaken public interest in our work.

It is true that annual festivals have been heretofore provided for those of the society who have carried the laboring oar. The society ever has been and should be ready to recognize and reward service, and beyond this it is clear that these festivities are joyous and useful occasions. But it cannot be denied that they are open to the charge of exclusiveness — a charge from which we suffer more than most of us are aware. Add to this the fact that these festivities are an increasing and a very considerable expense to the society, and it becomes a question in which we are alike concerned, whether the best interests of the society require some modification of our present custom. It is not my province to indicate future action, yet I am confident that every suggestion which is prompted by the desire for the increased influence and the welfare of our society will meet a favorable consideration.

And now, fellow members, in leaving my official position, once more to join the ranks and to compete with you for the prize of excellence and combine with you to advance our standard, it is with peculiar pleasure that I yield this chair to a personal friend, one who has so successfully and repeatedly distanced me at your exhibitions, who, having won wreaths of laurel all along the field of literature, can give us happy assurance that he will add fresh garlands in this field of Nature. That the interests of the society may abundantly prosper in his hands, let us see to it that our part is well done.

Mr. Strong then introduced to the Society the President elect, Francis Parkman, who, on taking the chair, delivered the annual address, as follows:

Address of President Francis Parkman.

Ladies and Gentlemen of the Horticultural Society: —

In entering upon the duties to which you have done me the honor to call me, I feel that I am fortunate not only in the expression of your confidence, but also in the nature of

the office you have conferred. You have placed me at the head of a society whose sole aim is the promotion of that gracious art which, through all time, has been the companion and the symbol of peace; an art joined in closest ties with Nature, and her helper in the daily miracle by which she works beauty out of foulness and life out of corruption; an art so tranquillizing and so benign; so rich in consolations and pleasures; and one, too, which appeals to all mankind and finds votaries among rich and poor, learned and simple alike. Let us be grateful to the three deities who preside over these halls, and let us not fail to yield them a fitting homage. Horticulture, which in their serene and graceful trinity they combine to represent, is not one of the mechanic arts. It is an art based on a science, or on several sciences. When pursued in its highest sense and to its best results, it demands the exercise of a great variety of faculties, and gives scope to a high degree of mental activity. On the other side of the Atlantic, horticulture as a profession stands to-day in a position of eminence. It has proved an avenue to social consideration and public honor. Ability, energy, and self-knowledge can lead men to distinction by the pathways of the garden as well as by the dusty road of what are rather invidiously called the learned professions. Not only England, but Belgium and France have had their Sir Joseph Paxtons; men held in high esteem for scientific attainments and general culture. And this is but natural. Horticulture, broadly pursued, is an education in itself, and no pursuit can surpass it in training the powers of observation and induction. The mind of the true cultivator is always on the alert to detect the working of principles and carry them to their practical application. To read the secrets of Nature and aid her in her beneficent functions is his grateful and ennobling task.

Many years ago, a band of public-spirited men laid the foundations of this society. Its beginnings were feeble; it had its troubles and its storms; but it was in wise and careful hands. It survived the dangers of its infancy, and is now what we see it; not yet, let us hope, in its maturity, but in a robust and vigorous youth, full of promise, if we, its present guardians, will but stand true to it. Perhaps you are not all aware of the extent of the debt we owe to our founders, some

of whom still honor us by their presence; and long may they remain with us. The means of usefulness and influence at the disposal of this society far surpass those of other societies, I will not say in our own country, where horticultural organizations are still young, but in England itself, where the art of gardening has been cultivated so long and so successfully. Thanks to the generosity of our benefactors, and the skill and foresight of those who formed and guided us, we are in possession of a large funded property, yielding an ample revenue; while the Royal Horticultural Society of London, which has accomplished so much, has no fund for its support, and depends on the yearly assessment of its members. Under the faithful and able administration of those to whose keeping it is entrusted, the property of our society increases steadily, and with it, its means of answering the intentions of its founders and the just expectations of the public.

Now, with all these resources, what has the society done? The society has done a great deal. None other in the country has done more, — perhaps none has done so much, — to kindle and to gratify horticultural tastes, and this by influences both direct and indirect; for it has become the parent of many local societies, each a centre of influence. Not only has it diffused the love of fruits, flowers, and gardens, but it has exercised an elevating influence on horticulture as a profession; for commercial gardening has this great advantage over most other forms of trade, that in it the love of art is married to the pursuit of profit, and this love of gardening for its own sake, as well as for what it will bring, has received a powerful stimulus in these halls. Witness the increasing zeal for the importation and production of new varieties, and the increasing emulation in the display of well-grown specimens which our exhibitions constantly evince. We have done much; but far more remains to do. The great resources in our hands, used with a judicious and discriminating liberality, will secure for us in American horticulture a preëminent place of honor and influence. Our numbers are great, but it is not our numbers; our wealth is great, but it is not our wealth alone that can lift us to the height of our possible destiny. It is the spirit in which our means are used, and the wisdom that guides us in their use. The great function of this society is to recognize and to requite with honor and profit every

form of horticultural merit according to its nature and degree. It cannot be too deeply felt that in the establishment of prizes and their distribution, a task is assigned us, more and more difficult and more and more responsible.

American horticulture labors no doubt under some disadvantages. It shares the tendency which belongs to all our democratic civilization to diffuse itself widely without rising very high. It is for us to strive by every means to break that barren routine and repetition into which it is so much inclined to fall; to wean the cultivator from beaten tracks and teach him that eminence in special cultures, and not a feeble mediocrity in all, is the best condition of his enjoyment and his success. Nor will this tend to narrow him; for he who has mastered completely one branch of cultivation, has gained the knowledge and the skill to master all the rest.

Above all, let it be remembered that ours is a position of responsibility. Those who endowed us, and those who labored for us in the past, have left us a trust to administer. Ours is a mission, not narrow and personal, but generous and broad. The public has claims upon us, and let us answer them in full.

One regret mingles with the feelings with which I address you. It would have been better for us all if the honored citizen and bountiful friend of the society, whom you first chose as your president, were standing to-day in my place. But the engrossing cares of a crowded life forbade Mr. Hunnewell to accept a position, which, grateful and honorable as it is, is not without its perplexities. As for me, while lamenting with you our common loss, I can only say that what strength I have will be employed with a single view to the interests of the society, and the art of which it is the exponent and the patron.

Voted, That the thanks of the Society be presented to William C. Strong for valuable services rendered during his administration; and that a committee of three be appointed to procure and present to Mr. Strong a suitable testimonial.

The chair appointed Marshall P. Wilder, Edward S. Rand, Jr. and Charles O. Whitmore, as that committee.

Marshall P. Wilder, from the committee to confer with H. Weld Fuller, in regard to his resignation of the chairmanship of the Committee on Ornamental Gardening, reported that other engagements would prevent him from continuing in that position.

Voted, That the thanks of the society be presented to Henry Weld Fuller, for his able and valuable services, extending over many years, as Chairman of the Garden Committee, of which his reports, published in the Transactions of the Society, present ample evidence; and that the society deeply regret the necessity which demands his resignation.

The secretary announced a vacancy in the Garden Committee and one in the Library Committee. Robert Manning and John G. Barker, were appointed a committee to nominate candidates to fill these vacancies.

Marshall P. Wilder and Benjamin G. Smith were appointed a committee to nominate an editor for the current year. The committee reported the name of Robert Manning, who was unanimously elected.

The several sums recommended by the Executive Committee for prizes for the current year, were, on motion, appropriated as follows:

For Plants and Flowers, ...	$2,800 00
Fruits, ...	2,100 00
Vegetables, ...	1,200 00
Gardens and Greenhouses, ...	300 00

On motion of Charles O. Whitmore, the sum of three hundred dollars was appropriated for the increase of the library during the present year.

Voted, That a committee, of which the president shall be chairman, be appointed with full powers to take such action in the matter of petitioning the legislature for the enactment of a statute for the prevention of the increase of noxious insects, and to act in the premises in connection with the State Board of Agriculture, after conference with the various agricultural and horticultural societies in the state, as shall seem expedient.

The chair appointed as that committee, John B. Moore, Benjamin G. Smith, William H. Spooner, and Robert Manning.

The committee appointed to nominate candidates to fill vacancies, reported as follows:

For the vacancy in the Garden Committee, Charles G. Loring, of Boston:

For the vacancy in the Library Committee, E. W. Wood, of Newton, both of whom were unanimously elected.

The Library and Garden Committees were authorized to elect their own chairmen.

Miss Mary T. Saunders, of Salem, was elected to membership.

Adjourned to Saturday, January 9.

BUSINESS MEETING.

Saturday, January 9, 1875.

An adjourned meeting of the society was holden at 11 o'clock, President Parkman in the chair.

Marshall P. Wilder, from the Executive Committee, reported the following list of corresponding members, who were duly elected.

Dr. William Le Baron, Geneva, Ill.
C. C. Langdon, Mobile, Ala.
D. W. Beadle, St. Catharines, Ontario.
W. J. Beal, Lansing, Mich.
George W. Campbell, Delaware, Ohio.
Parker Earle, South Pass, Ill.
George Ellwanger, Rochester, N. Y.
O. B. Hadwen, Worcester, Mass.
Thomas Hogg, New York City.
G. F. B. Leighton, Norfolk, Va.
J. E. Mitchell, Philadelphia.
P. T. Quinn, Newark, N. J.
William Saunders, Washington, D. C.
Robert W. Starr, Cornwallis, Nova Scotia.
P. M. Augur, Middlefield, Conn.
Arthur Bryant, Sr., Princeton, Ill.
Josiah Hoopes, West Chester, Pa.
T. C. Maxwell, Geneva, N. Y.
D. Redmond, Pass Christian, Miss.
Dr. John Stayman, Leavenworth, Kan.
Dr. William M. Howsley, Leavenworth, Kan.
Charles V. Riley, St. Louis, Mo.

Robert W. Furnas, Brownsville, Neb.
Thomas A. Allen, Nebraska.
Dr. Charles C. Hamilton, Cornwallis, Nova Scotia.
Rev. Robert Burnet, Hamilton, Ontario.
William Robinson, London.
Shirley Hibberd, "
William Paul, Waltham Cross, London.
Rev. H. Honywood Dombrain, Ashford, Kent, England.
Rev. S. Reynolds Hole, Newark, England.
Fisher Holmes, London.
Rev. Rushton Radclyffe, London.
B. S. Williams, Holloway, London.
Anthony Waterer, Knapp Hill, Woking, Surrey, England.

Edwin W. Buswell, Treasurer, presented his annual report, which was accepted and referred to the Committee on Publication.

Adjourned to the first Saturday in February.

MEETING FOR DISCUSSION.

Immediately on the adjournment of the business meeting, W. C. Strong, Chairman of the Committee on Publication and Discussion, announced a meeting for discussion on the cultivation of the *Azalea Indica*, to be opened by a paper by Marshall P. Wilder; but before the commencement some debate took place as to the proper officer to preside at the meeting; President Parkman, E. S. Rand, Jr., E. W. Buswell, and others, deeming it a meeting of the Committee on Publication and Discussion, and therefore to be presided over by the chairman of that committee, while Messrs. Strong, Charles M. Hovey, John B. Moore, and others, thought it proper that the President should preside. It was unanimously agreed that the assembly was not a meeting within the meaning of the By-Laws, and that no business could be legally transacted. Mr. Strong took the ground that these public discussions were not to be regarded merely as meetings of a Committee, but rather as of the Society, and that it was the duty of the President, by virtue of his office, to act as presiding officer. On motion of Mr. Strong it

was then voted, with but one dissenting voice, that the President preside.

Mr. Wilder then read his paper as follows:

Cultivation of the Azalea Indica, With special Reference to the Production of New Varieties.

BY MARSHALL P. WILDER.

Perhaps in all the works of Providence, there is nothing more distinct in the procreation of species, than the human race and the vegetable creation. Yet, the same laws which govern animal creation are, in a great measure, applicable to plants. Considering this fact it is remarkable that the hybridization of plants, which places in the hand of man the means of indefinite improvement and increase, is of so recent a date. We know not what progress China had, in the long period of her existence, made in the art of hybridization, but it is a singular fact, that when it was known that the vegetable as well as the animal creation could be joined in wedlock, and that similar results in each were governed by similar laws, the age of progress in this art was deferred so long, even almost to our own time.

Much complaint exists among botanists in regard to the hybridization of plants, as causing confusion — breaking up the natural division of plants by crossing the species — but for my own part, I think that instead of confusing the labors of the botanist it has been the means of more clearly defining these divisions, and has given to the world thousands upon thousands of plants far more beautiful and useful than the types from which they were produced.

The production of new varieties by the artificial crossing of flowers, by which we can blend the best characteristics of each, affords a source of pleasure and interest to which there are no bounds. Although the art of producing new varieties in this way is of comparatively modern origin, it has now become the acknowledged source of improvement, and the best means for the acquisition of new and improved varieties, upon which we are to rely in future for perfection in the vegetable kingdom. This has been my conviction for forty years, and it has influenced me in practising this art. I am, therefore, happy to give to the public any information that I may possess.

It is only about thirty years since much attention has been given

to the production of new varieties of the azalea. But those originated within the last twenty years may now be numbered by thousands; one of my friends in Belgium, having produced more than six hundred named kinds. Belgium, Germany, and England, have given more attention to the production of new varieties than all the rest of the world. And never before has there been more interest or enterprise in this line of cultivation. Every year brings us something desirable, and now that the Japan azaleas (*A. mollis*) are coming to our aid, we may expect even finer results than before. It is quite probable that by the intermixture of the Chinese and this new hardy species we may obtain varieties with persistent foliage. These Japan varieties are believed to be hardy; a plant in the Cambridge Botanic Garden, which came from Japan seed, having stood entirely uninjured for several years without protection. The Chinese varieties are easily crossed by the pollen of the Japan sorts, and I have now a pan of young plants just coming up, which are the result of hybridizations made last spring, between *Azalea Indica* and *A. mollis*.

New varieties are raised by the cross-fertilization of flowers, which produce an abundance of seed. The seed vegetates freely, and with good care will produce fine little plants that in two or three years may be made to bloom, and thus give us early the results of our efforts. The plants which I hold in my hands [Mr. Wilder here exhibited two seedlings which were acknowledged by all to be of remarkable size for their age], are the results of seed produced by the Souvenir de Prince Albert impregnated with the pollen of various other kinds. The seed was sown last winter, and came up in March or April. These plants, as they stand, measure more than a foot in height, and I expect to have them in flower next year. To accomplish this I shall either take off the tops and graft them into strong stocks, or, what is more sure, inarch the tops on to strong stocks. The process of grafting may be either by split grafting or by a side graft, but in these cases the plants should be laid on their sides in a close frame and in very mild heat; or they can be worked by standing the stock upright and slipping over the whole a common glass lamp chimney, stuffing the top with cotton, so as to keep the air close and the graft fresh until a union has taken place, and the graft begins to grow. This is called the "stifled graft," and was introduced some thirty-five years since by the Chevalier Soulange

Bodin, for the propagation of camellias, azaleas, and other hard wooded plants. The *Azalea Phœnicea* has been found to be one of the very best for stocks.

Cuttings are made of half ripened wood, cut smoothly, just below a leaf bud. They may be planted in pans or pots, very thoroughly drained with broken pots, on which should be a covering of moss, cut hay, or spent hops from the brewery, which I have found to be most excellent for drainage. For soil we use two-thirds peat and one-third fine white sand, but they will do equally well in sand alone. As regards temperature, cuttings of the azalea will root in a shady, cool place in the greenhouse. This is, however, a slow process, and the better way is to cover the pots with bell glasses, or, which is still better, to place them in a bed with a mild heat. In this way cuttings root very freely, and in two years, with good care, will make pretty blooming plants.

In the production of new varieties, if you desire white varieties, use white sorts to cross with; if red, then use red; if variegated sorts are desired then impregnate with the pollen of striped or spotted sorts. For this purpose I use a small camel's hair pencil, which I have always in my pocket, taking the pollen from one flower and transferring it to another. The proper time to impregnate the azalea is about three days after the flower is open. At this time the stigma will be well developed, and in such a state as to receive the pollen readily and before the stigma becomes too glutinous.

But we desire to go farther than merely obtaining beautiful varieties, and to make the azalea hardy, so as to stand the open air like the deciduous species, and this I deem quite probable by the varieties which we shall obtain from the crosses of the Japan species. The *Azalea Indica alba* is nearly hardy in England, and has stood in some places for many years without protection. A cross with this and the Japan species would give hopes of success.

Although I have spoken of hybridization as the means of producing new varieties no plant is more given to what is called sporting than the azalea. Some of the very best varieties we have, owe their origin to a freak of nature; that is, to flowers which have departed from the natural type and given flowers of other colors. To these we have given the name of sports. They are perpetuated by grafting from the sporting branch, as I have described in my lecture on hybridization, published in the Transactions of the Society, for 1872.

The seed is gathered in October or November, and kept until January, when it is sown in shallow pans in two-thirds peat and one-third fine sand. When the young plants have attained to the height of two inches, they should be potted off in thumb pots, and placed in a bed of tan or similar substance, where the bottom of the pot will not dry suddenly, near the glass in the shady part of a pit or greenhouse. These pots, as well as those afterwards used, should be most thoroughly drained.

In the treatment of established plants I have drained with pot-sherds, with a covering of cut hay, moss, or spent hops from the brewery, so that the plants might take a full supply of water without the earth becoming sodden and sour. The plants should at all times have a regular supply of water, especially when in flower and while making their growth. I have found that it is well to keep them in the greenhouse until the weather becomes warm outside, so that they may ripen their wood thoroughly. They should then be removed to a cool, shady place, or, if allowed to receive the sun in the middle of the day, they should be plunged in some substance, so as to prevent the roots from becoming injured by the heat of the sun on the pots. Mr. Hunnewell's method is to pile soil around each separate pot, and I have never seen any azaleas in better condition than his. The best season for potting is immediately after the plants have made their growth in the spring, and the best soil is three parts fine old peat and one part fine sand. The azalea may be forced early, and a succession of flowers may be had from December to May, if kept in a cool house until wanted for forcing.

One word in regard to the form of plants. There is a natural form, grace, and beauty which Divine Wisdom has given to every species of plants, and our treatment of them should correspond with that rule of beauty which he has given us for our guide. True there are from some cause often naturally ill formed plants, but these are exceptions to the general rule. In a word, I am not in favor of the modern method of training and tying down of the branches, to make exact spherical, conical, or other geometrical forms. Such are not the natural forms, and I think we should follow nature as closely as we can in the training and pruning of the azalea, only early removing such gross or rambling branches as are necessary to keep the plant within proper bounds. This training of azaleas into geometrical or fantastic forms is just as

unnatural as to train an American elm into a pyramid, or a Norway spruce into a standard with a high stem and a globular head.

Nothing in the line of ornamental plants under glass can surpass the gorgeousness of the azalea, with its rich and varied colors, and it is not probable or perhaps possible that any plant will ever exceed it in beauty. A large conservatory of these plants, when in full bloom, may be truly described as effulgent with beauty and glory.

Charles M. Hovey said that the Azalea had long been a pet of his, and Col. Wilder had given us a fresh reminder of its beauty. Mr. Hovey was one of the first to raise new varieties from seed in this country, having in 1837 or 8 sown a large quantity of seed and produced a great many fine seedlings; among them a white variety which he named *alba crispiflora*, and which he thought scarcely surpassed. Some of the plants then raised are now very large specimens. Fine large plants can only be obtained by grafting. He agreed with Col. Wilder that the formal training, practised by some cultivators is, in a certain sense, unnatural. Still, to produce a well shaped bush we cannot dispense with pruning, and the best formed specimens were made by a combination of tying and pruning. Grafting must be done when the wood is comparatively soft; he had inserted thirty, forty, or fifty grafts into a single plant. Some of these will not be in the right place and will require tying to a certain extent, in order to have the wood equally distributed.

The production of new seedling varieties is of great importance. By hybridizing with *Azalea amœna*, we might get a hardy race, better perhaps than from *A. mollis*, and also an evergreen one, which would be desirable. We cannot do much with *A. ovata*, though a beautiful species and probably hardy. His method had been to winter the seedlings in a cool house and then to plant out in the ground as soon as the weather would admit. He had now two or three thousand plants which can be set out in the ground, and, if taken up in time and properly treated, they will bloom in the greatest profusion.

Like all plants of the Heath family, they require some protection for the roots. They will continue to bloom after being brought into the house. No plants are so quickly injured in the buds by frost; an early frost before the plants were housed, which did not destroy the heliotrope, injured every flower bud of the azaleas,

though the foliage was not touched. The terminal leaves hold the moisture from the dew around the buds.

The point we should aim at in raising seedlings is to get a fine variety with good flower, foliage, habit, etc. Many varieties, when in bloom, are so densely covered with flowers that it is of no consequence that they have no foliage. The plants may be frozen without injury, *if kept dry*, but if wet, the flower buds are done to. The azalea is adapted to every situation, and no lady need fear of failure when growing it in the parlor.

In answer to an inquiry as to the process of grafting, Mr. Hovey said that he takes off the end of a shoot, pares off one side of both scion and stock, and ties on as a side graft. The plant is then laid on its side and covered with a newspaper, or placed in a frame, when, if kept close and warm, they unite and may be removed in six or eight weeks to the house.

Mr. Strong called attention to the growth of the two seedling plants exhibited by Mr. Wilder. He thought there was a tendency to improvement in the culture of plants generally; and that these were illustrations. Mr. Hovey's plan of treating seedlings would dwarf the plants, but he believed it was better to keep them in rapid growth, like those exhibited.

President Parkman remarked that many cultivators of the azalea had been perplexed by the behavior of their young seedlings.

Mr. Hovey said, in reference to Mr. Strong's remarks, that the plants were not sure to be good varieties, and his object was to grow them in a small space until their character was decided. It would require a large house to grow a large quantity, and so much room could not be afforded. The number of seedlings that must be grown to raise superior varieties is very great. Margottin, the great French rose grower, for instance, had five acres of seedling roses, and Mr. Hovey visited an English dahlia raiser who had four acres of seedlings, from which he selected only one single plant in a year that he thought worthy of introduction and a name.

Grafting can be done at any time, but from the 20th of July to the first of September is best. The seed is remarkably fine, and should be sown in sandy loam or sandy peat, with a little of the same over them. It should be protected with a glass laid over the pan, and watered very cautiously. Worms are apt to trouble the

seedlings. As soon as they are large enough to handle, they are pricked out in boxes a foot square, about fifty in a box. The first of June they are potted and put under a whitewashed frame, where they remain, if to be kept in pots, or until the weather is fine for planting out in the ground.

Mr. Wilder said that his method was to sow the seed in broad pans in January or February, and pot when the plants are two inches high, in pots one-third full of drainage. He had petted his plants, which would perhaps account for the size of those exhibited.

John B. Moore enquired whether their large size might not be owing to the habit of the parents. One of the parents, the Souvenir de Prince Albert, is a strong grower, while Mr. Hovey may have used seed of weaker growing kinds.

Mr. Hovey called attention to the fruit of *Chamœrops Fortunei* exhibited by him, the spike resembling a very open bunch of very small, round, blue grapes in appearance. This is a Chinese species, remarkable as the hardiest known palm, and Mr. Hovey believed it was destined to be cultivated throughout the United States. The plant was not taken into the house until about six weeks ago, when the thermometer indicated only 12° to 15°, and was then placed in a house when the temperature fell as low as 15°. The plant is diœcious, and Mr. Hovey was fortunate enough to possess both sexes. The flowers are very beautiful, the pistillate flowers of a light yellow color and the staminate ones larger and more showy, of a deep golden yellow. The plant produced three clusters, that shown being the ripest. It was imported fifteen or sixteen years ago, and is now eight feet high. It can be allowed to stand out doors until November, and can be grown by everybody, and is ornamental not only for the fruit, but for its flowers and the fibres around the stem, which present the appearance of being artificial. These are used by the Chinese for making cordage. The tree can be placed on the lawn from the first of April to the first of December, and Mr. Hovey intends, as soon as he has a sufficient number, to try it out doors through the winter with a slight protection of straw.

J. H. Woodford asked whether the hardiness of the species would be increased by sowing these seeds in the open ground and allowing them to remain there through the winter.

Mr. Hovey replied that the suggestion had been made before in regard to the *Araucaria imbricata*, and that there was some show of truth in the theory. These seeds will be as likely to produce hardy progeny as those from its native habitat, and perhaps more so.

Mr. Strong hoped that the subject of the effect of climate and selection on the hardiness of plants might come up for discussion at some future time.

James Cruickshanks said that he had seen the first *Araucaria imbricata* introduced into Great Britain, at the Botanic Garden at Edinburgh, where Mr. McNab, the curator, had also from thirty to thirty-five specimens six feet high, which were only protected by placing a mat over them.

Mr. Wilder said that at Elvaston Castle four hundred *Araucarias* had been planted, but when he was there, in 1867, they had diminished to twenty or twenty-five. They had then been planted about twenty years.

E. S. Rand, Jr., spoke of the *Phalænopsis amabilis* exhibited by him, a rare orchid known as the East Indian Butterfly Plant, being a native of the islands of the Indian Archipelago, where it grows upon the branches of trees, to which it clings by its thick fleshy roots. It is a true epiphyte, being wholly sustained by the moisture in the air. The foliage is dark glossy green, the flowers pure white, with pink tendril-like antennæ from the centre. The specimen on exhibition was remarkably fine; there were three flower stalks with twenty-one fully expanded flowers and many buds. The flowers measured three and a half inches in diameter. It would be hard to find a more exquisitely beautiful flower, whether we regard the purity of color or the grace and elegance of the long racemes of bloom. It is very rare to find a plant of such size and so well bloomed; indeed, there are very few plants in this country, and their high cost and the difficulty of importation will forever prevent their becoming common.

Mr. Hovey remarked on two very beautiful plants of another orchid, *Lycaste Skinneri*, exhibited by James Cartwright. This species is not often seen; the flowers will last eight weeks when in a cool house where no drip or water can reach them.

The Chairman of the Committee on Discussion announced that next Saturday Benjamin G. Smith would give some account of his experiments to test the hardiness of different varieties of strawberries.

MEETING FOR DISCUSSION.

SATURDAY, January 16, 1875.

The discussion was opened by the reading of the following paper:

HARDINESS OF STRAWBERRIES.

BY BENJAMIN G. SMITH.

Mr. President and Ladies and Gentlemen:

At the request of several of our members, I offer a brief account of my experience, showing the *comparative hardiness of eight varieties of strawberries on clay soil.*

In the cultivation of the strawberry, more or less plants are destroyed during winter in consequence of being thrown out of the ground by the frost, notwithstanding they are covered in the usual manner.

In the spring of 1873, I prepared eight beds of as many varieties. All were treated precisely alike, the ground previously having been thoroughly underdrained; working the soil to the depth of eighteen to twenty inches and adding a compost of leaf mould, well decomposed barnyard manure, and wood ashes, sufficient to cover the ground to the depth of three or four inches. Each bed contained one hundred plants, twelve by fifteen inches apart, of the following varieties: President Wilder, Lady of the Lake, Wilson, Hovey's Seedling, Jucunda, Triomphe de Gand, Charles Downing and Green Prolific. All the above varieties were cultivated in the hill, all the runners being cut off. Last spring, on uncovering the plants, more or less dead ones were discovered. Perhaps it may be of some service to amateur cultivators, if not to others, to know the comparative loss of plants in the different beds. They were all covered with forest leaves and strips of boards placed upon them to prevent blowing off. The loss of plants was as follows:

Jucunda, none; Wilson, two; Triomphe de Gand, four; President Wilder, four; Lady of the Lake, five; Green Prolific, six; Hovey's Seedling, nine; Charles Downing, twenty.

It will be noticed that this experiment was on a strong clay soil, not a sandy loam. No advantage was found in hill culture, ex-

cept with Jucunda and Triomphe de Gand. The old foliage was all cut off after fruiting, and during the growing season I was careful to keep the beds free from weeds and moist during the dry weather of June. In the early part of June they were mulched with fine grass clippings from the lawn; this I consider an excellent material for the purpose, as it is wholly free from seeds, which, in other kinds of hay and straw, often prove troublesome by propagating weeds or grass in the beds.

Mr. Smith added that the result of his experiments was that his Jucundas took the first prize for the best four quarts of any variety.

John B. Moore remarked that, as Mr. Smith had said, this test was confined to a clay soil, and therefore was not a criterion for varieties adapted to a sandy soil. Charles Downing, for instance, succeeds only on light soil, and in such soils the number destroyed would be much less than in Mr. Smith's experiment. The Jucunda, President Wilder, and Triomphe de Gand are best adapted to heavy soils. The treatment of cutting off the runners should not be applied to varieties which, like Hovey's Seedling, throw up but one fruit stem. In an observation of twenty-five years, Mr. Moore had never seen more than a single fruit stem on a plant of that variety. The President Wilder produces two fruit stalks. He doubted whether a great quantity of stable manure was beneficial to the strawberry. On his land he had found vegetable matter, such as peat composted with ashes, much better. He also doubted whether liquid manure would grow as good strawberries as pure water, if the soil was in good condition. There is no secret in growing strawberries; they will grow in almost any soil, and are not an exhausting crop, for any crop will succeed after them. Every one who has ploughed up an old strawberry bed has noticed that the soil is so mellow as to be difficult to turn over.

Mr. Moore said that he had grown seedlings for many years, but had just found out the best way. If, instead of going to work to hybridize by hand, he had planted a staminate alongside of a pistillate variety, away from any others, the fruit of the pistillate kind would certainly be a hybrid. He now gets plenty of hybrids. He took seed from Rivers' Eliza, a strong growing English variety, and got three hundred seedlings, the same in fruit and habit as the parent, except that some were, perhaps, a little worse. The case was the same with seedlings from the Early Virginia. Of course

in selecting varieties to plant side by side to hybridize, you would choose such as possess the qualities which you desire to combine in your seedlings. Mr. Moore thought it best to wash out the seed as soon as the fruit is ripe, and sow immediately in a cold frame. The plants begin to come up in a very short time, and he covers the glass with boards to protect them during the winter, and plants out in the spring about two feet and a half apart.

Marshall P. Wilder said that it does not make any difference as regards fructification, whether fertilization is performed naturally or by the hand of man. The chances of producing a valuable new variety are far greater under the hands of a scientific practitioner than by the accidental crossing by the wind or insects. Mr. Moore's method of keeping his seedlings over winter is a very good one when they are raised on a large scale. When you wish to raise only a few hundred plants the seed may be sown in pans and afterwards pricked out in pots, and kept in a cool part of the greenhouse till spring. The main point is to be sure and select, as parents, hardy and prolific varieties, with fruit of good size, form, color, and quality, and by doing this we can attain all we desire. Seedlings do not show their characteristics sometimes for several years. They do not become settled. Van Mons mentions this several times. Some which are thought well of depreciate, and others improve. We are told that there is no variety so successful as the Wilson, but we shall have those which add superior quality to the other good points of that variety — perhaps we have them already. In breeding stock for improvement we select the best parents; from the best male and female we are to expect a good result.

President Parkman said that it had been noticed in hybridizing lilies, where there was a moral certainty that there could be no self-fertilization, that a flower was produced precisely like the female parent. Botanists have concluded, from this fact, that the effect of fecundation may continue through two generations.

Mr. Wilder said that he had crossed pistillate strawberries with varieties of the Hautbois, and, though it was impossible that they could have been self-fertilized, the seedlings produced fruit precisely like that of the mother plant. The results of these crosses were not worth perpetuating — they fruited poorly.

Edward S. Rand, Jr., remarked that some of the Hautbois strawberries were valuable as flowering plants.

Mr. Moore said there were certain varieties that would not produce a single fruit if away from others.

Mr. Wilder spoke of the late Nicholas Longworth, of Cincinnati, as one of the first to recognize the sexual character of the strawberry, and of his visiting a garden where there were a large number of pistillate plants, and offering a barrel of wine for a crop of fruit produced by them alone.

William Gray, Jr., read from "Hovey's Magazine" (Vol. xxx., p. 287) an account of his experiments, in 1863 and 4, with several varieties of strawberries, which settled the fact that the large foreign varieties were not adapted to our climate. He found Oscar the largest in size and best in quality of those tested.

Charles M. Hovey said that while most strawberries will grow on all soils some are very fastidious, and instanced the seedlings raised by the late Josiah Richardson, of Cambridge, who exhibited several varieties, apparently of much merit, and whose beds made a great show, but there was never any fruit of these varieties shown by other cultivators, and in three or four years they had all disappeared. President Wilder does not succeed with Mr. Hovey on sandy land, while Jenny Lind likes a light soil; he saw a great crop on such soil in the grounds of Mr. Fay, the originator. La Constante requires clay. Hovey's Seedling succeeds generally, but, being pistillate, requires a fertilizer, and Boston Pine has proved the best for this purpose. If properly fertilized Hovey's Seedling will produce to the very end of July from the tips of the bunches. These late berries being few in number are not gathered, and, decaying on the ground, produce seedlings; hence the only way to keep Hovey's Seedling true is to make a new bed every year. Much of the complaint against Hovey's Seedling is caused by planting seedlings produced in this way, instead of the true variety. The Boston Pine never gives any trouble in this way.

Mr. Hovey referred to an article in the "Transactions of the London Horticultural Society," on the sexuality of strawberries, which was denied by Dr. Lindley, and said that he had gathered wild strawberries on his own ground which were entirely pistillate. The Belgians have raised many new kinds from our improved varieties, while the English have propagated mostly or wholly from the Chilian and Surinam species, gaining very large fruits, such as Admiral Dundas, which grows to three inches in diameter, but is somewhat tender like the parents, and very difficult to keep over

winter here, and the Sir Charles Napier and British Queen, which are also very large, but ripen imperfectly, like the Agriculturist. A staminate variety is perhaps better for general cultivation than a pistillate. In 1836 he set out twelve plants of Hovey's Seedling in an old asparagus bed, in one row twelve feet long, and one foot apart, where it was a little shady. They grew luxuriantly and filled a space twelve feet by three, and he gathered from the bed twelve quarts, besides a great many which were eaten from the bed, and given away. This was at the rate of from 12,000 to 20,000 quarts per acre, but it would be as fallacious to conclude from this limited experiment, that an equal crop could be grown by the acre, as it would because the crop of a single Beurre Diel pear tree had sold for seventy-five dollars to reckon on a whole orchard at the same rate. Strawberries cannot be cultivated to advantage in a hap-hazard way, as with the Jersey cultivators, who get but from fifty to seventy-five bushels per acre. We hope that something may yet be produced better than any we now possess, and Mr. Hovey was glad to see the Cambridge cultivators again in the field.

Mr. Wilder said that he was glad that Mr. Hovey had alluded to the dropping of seed in the bed. It was undoubtedly in this way that the Hovey's Perfect, advertised as a Hovey's Seedling with perfect flowers, was produced. In raising seedlings he had found Hovey's Seedling as good a mother as could be used.

Mr. Rand spoke of the beauty of *Fragaria Indica* for greenhouse cultivation, and especially as a basket plant, bearing lively yellow flowers and brilliant red fruit, which, however, is not eatable, on its hanging runners of more than a foot in length.

President Parkman added that this species has attracted much attention in France and England. It does not survive our winters.

Mr. Moore said that some of the highly praised new varieties are pistillate, such as Champion, Late Prolific, and Green Prolific. He thought that a careful cultivator, who understood the subject, could get a better crop from the pistillates than from the staminates; they do not show as much fruit, but they perfect all. Mr. Moore remarked that Mr. Hovey, in his estimate of the crop from an acre, made no allowance for space occupied by paths.

Mr. Hovey repeated his belief that in the hands of amateurs the staminates would give most satisfaction. The Green Prolific was an old sort. The Shaker or Austin is a tasteless fruit; spec-

imens sent to Mr. Hovey when it was first introduced took fifty-four to a pound. Napoleon III, introduced by him direct from the raiser, is of poor quality and very soft, though large and showy.

Robert Manning stated his belief that Mr. Hovey could not have had the true Napoleon III. As he had tasted that variety it was of the finest quality — nearly, if not quite, equal to Lennig's White. The plant is, however, exceedingly difficult to carry through the winter.

Joseph H. Woodford said that he was an amateur cultivator, and gave his experience with a bed of Jucundas, of which he spaded up all but a strip a foot in width, and applied saltpetre as a fertilizer. The vines grew so vigorously that the fruit was all smothered. He had grown President Wilder and found that they should be allowed to run over the whole ground, and in this way you can get a splendid crop. Jucunda and Triomphe de Gand should be grown in hills. Mr. Woodford emphasized the point that new varieties could surely be produced by planting a staminate variety alongside of a pistillate. He had planted two frames with President Wilder for early fruiting, choosing this variety on account of its stubby growth. He took the runners of the previous year and planted them in the frames in spring. He will give the results of this experiment. He had found the lawn clippings, recommended in Mr. Smith's paper for covering the beds, objectionable, as the grass sticks to the strawberries and fingers in picking.

Mr. Hovey thought that if Mr. Woodford had set his plants in a row as long as from here to New York, so as to give them plenty of room to spread, he would not have got a crop. No fertilizer will produce anything but foliage, and the foliage smothers the fruit. In regard to mulching he adhered to the material suggested by the name of the plant, and used straw, passed through a cutter. He uncovers the beds about the first of April.

Mr. Wilder spoke of the advantage of having strawberries early, and said that to secure them he took a seven light frame, and filled with plants twelve by nine inches apart, keeping the runners cut off. They are now covered with leaves, and he expected to have a bountiful supply a month before we can get them in the open ground.

Mr. Woodford said that he got the information which induced him to try the experiment described, from Charles Garfield, who

has shown fine specimens ripened in frames a month in advance of the regular season.

Mr. Garfield said that he had had only one or two years' experience in cultivating strawberries in this method. The beds were now covered with leaves, and he puts on the frames about the first of March; he does not give strong heat, as the plants do not require it. He waters about every day when the sun is out, putting in hot water so as not to chill the ground. A bed, fourteen feet by six, produced twenty-four quarts, just as good flavored as if grown out doors, which sold for from fifty to sixty cents a box. He waters when in bloom, with weak liquid manure. The ground had been previously well manured; he likes to manure heavily—would like to give his grounds a dressing six inches in thickness.

Mr. Wilder said that his experience in the use of fertilizers had been the same as Mr. Hovey's, though with him they had never produced such extraordinary growth as Mr. Hovey had described.

Mr. Moore said that his remarks in relation to fertilizers had been misunderstood. He thought vegetable manure and ashes better than animal manure. He doubted whether the gentleman who had spoken of a dressing six inches thick realized what that meant; it would require a hundred and seventy cords to the acre to manure at that rate, and he did not think a crop of strawberries would pay for such a quantity at ten dollars a cord. He believed in having the ground rich, and when it is, he thought pure water better than liquid manure. He would not condemn fertilizers. The Wilson does not produce foliage enough to cover the fruit, and is benefited by the application of Peruvian guano. Peat and ashes are cooler than animal manures. A piece of ground just cleared up will produce better strawberries than an old garden.

Mr. Hovey said that he should not like to trust a hired hand to apply guano, but would prefer to do it himself. A quart to a row of Wilson a hundred feet long and six feet wide, or at the rate of an ounce to a square rod would probably benefit it, but as commonly used it tended to promote the growth of leaves rather than of fruit. He goes through his beds and digs in manure between the rows, after the fruit is gathered, to produce plants.

Mr. Wilder said that he had two rows of strawberries, each a hundred feet long, which he directed a son of Erin to manure with guano, and he put on a whole bag, and the result was, as might have been anticipated, that the plants were all killed.

H. Weld Fuller stated that some of the newspapers contained articles of late, raising the question whether or not phosphates and Paris green were poisonous to the ground.

Mr. Rand said that he had found white pine needles an excellent winter covering for his strawberry beds.

Mr. Garfield said that he had sold five hundred dollars' worth of strawberries from a quarter of an acre, and he thought he could afford to manure at the rate which Mr. Moore deemed so extravagant, but land would not need to be manured so heavily every year.

MEETING FOR DISCUSSION.

SATURDAY, January 23, 1875.

The discussion was opened with the following paper on

SHADE TREES.

BY JOHN G. BARKER.

The embellishment of our homes and the grounds surrounding them, is a subject that has often been upon my mind, and although by no means new to any one present, it is one that will bear a few moments' consideration. The taste for such things is perhaps not very strong with many, and thus while the supply of the more needed wants and the gratification of more pressing tastes are attended to, the setting out of trees is put off to a more convenient season. I think that to a great extent, a false opinion prevails that trees do not add much to the value of an estate, if we may judge from the ruthless manner in which they are being cut down in many of our cities; indeed in the city in which I now reside, little regard is paid to them, and it seems to be a sort of understood law that if a tree is wanted out of the way by any one, it is sure to come down; and it is no uncommon thing to see very many of our best trees mutilated by fastening horses to them. In many cases, to facilitate this barbarous treatment of our trees, chains are actually driven in them to fasten the horses to, and I call to mind at this moment some of the finest elms in the city that have

been badly mutilated in this manner. These facts, which have come under my immediate observation, with the additional one that so many houses are built which are left entirely destitute of trees of any kind, have led me to offer a few remarks on this subject.

It is a fact admitted by all persons of taste that trees add to the charms of any location. In summer time they protect it from the scorching rays of the sun, and provide pleasant and cool retreats from the heat, and in winter are of no small value in protecting our homes from the cold and piercing blasts which then prevail. Trees around a house impart a home-like and attractive appearance; houses enough are built, yet how few are the homes adorned by trees. A few maples, elms, lindens, or mountain ashes, with the larch and Norway spruce, and some of our fine shrubs, will render the humblest home an attractive spot. A house with the roses climbing up the piazza in a mass of bloom, some handsome trees around it, its paths clean and neat, the flower beds tastefully arranged, though plainly built and humble, and the whole expense but trifling, speaks volumes to us. It tells us at a glance that home affections dwell there, and think you that the influence of such a home will not be felt, and that at the close of the day when work is over, and those who dwell there sit down to enjoy themselves before the darkness of the night, these pleasant surroundings have no influence over the mind? Yes, they are a constant reminder to us that the Giver of all good has bestowed upon us these beautiful trees to adorn and make our homes happy, and from such a home go forth, as can from no other, those happy influences of mercy and goodness which bring joy to the household and pleasure to all around us.

Perhaps I can do no better than to call your attention very briefly to a few extracts from different journals on this subject. In an article on "Shade Trees by our Roads," in the "Homestead," the writer says, "We could wish that our own people had a little more enthusiasm, especially that the dwellers in our rural districts could drink in enough of the spirit of tree worship, to erect shrines along the highway, where every traveller could offer his devotions. We should like to see these wooden shrines with canopies of living green, sixty feet apart on both sides of every public and private road in the commonwealth." Again the same journal says that "we have already made a good beginning in tree planting, and

some of our cities and villages are well furnished with the best of our ornamental trees. New Haven well deserves its reputation as the 'City of Elms.' Norwich is almost as well favored; and, indeed, there are streets in all our cities that need nothing more in the way of shade trees. Almost all of the river towns have more or less well-grown trees, some of them dating back one hundred years or more." I will venture an extract from another article in the same journal, which speaks in unmistakable language, and as I can certify to the truth of it, having been a resident of Hartford at the time, I have copied so much as pertains to what seems to be a prevailing notion of our day. After speaking of the management of trees in cities, and alluding to the fact that some noble trees had recently been sacrificed in Hartford to the ruling passion of the Court of Common Council to have wide sidewalks, unshaded and unobstructed, it says: "A tree which cannot grow in half a century can be cut down in an hour, and by the time another sultry summer has passed, our people will miss the cooling shade of the forest lords which have bowed to the axe-man's stroke during the present week. We give a short conversation between two of our citizens, which shows the current of public sentiment. 'Fine tree, that,' said A to B, as a couple of Hartford men were passing the glorious old elm that stands in the lower green in Wethersfield, near the brick school-house, and in front of the old Webb place. 'Yes,' said B, 'it is a noble tree; if they had it in Hartford they would cut it down in five minutes.'" Again, in another article,— "Down with the trees. The large elm tree, in front of the old Brace house, on the east side of Main street, just above Arch street, fell this morning with a great crash. The tree is about four feet in diameter at the butt, and was a shade and ornament to the street; the vandals are digging up the walks and destroying the shade trees which many years cannot replace, and Councilman's Herletschek's policy is being carried out. Said he last night in the Council, 'If any pody want trees let 'em moofe out in de coontry, I don't want no trees in de sitewalks.'"

Is not this idea of the Hartford councilman entertained by many of the inhabitants of our cities and towns to-day? It seems to me, Mr. President, that the influence of this society cannot be used to better advantage than in encouraging among our members a new interest in this department of our work. The influence of a few spirited individuals in every town and city would in a

few years make a wonderful change, and instead of seeing as we do now, in many of our towns and cities, only a few trees here and there on the various streets, we should see both sides of the thoroughfares handsomely lined with trees, which would make them attractive to the stranger and pleasanter to ourselves. But how often do we hear people say that it is useless for them to move while others are perfectly indifferent to any improvement. One of the best refutations of this do-nothing doctrine is to be found in New Haven, known as the "City of Elms." Beyond a doubt it is the best shaded city in Connecticut, and I am not sure but the best in the New England States, being known all over the country for the grandeur and magnificence of its trees. And this is all due to a single individual, as much as if he had planted every tree himself. The example of one man inspired the public spirit which has planted and fostered the elms that are the pride of the city and the admiration of the stranger. Now let us enter upon this work with enthusiasm, and we shall soon find that our neighbors are being gradually drawn into our sympathies.

But perhaps some will ask, How shall this be done? I would answer that we need no better example than that given by the Newton Horticultural Society whose members meet during the winter months, on stated evenings at the residences of the members, and discuss these very subjects. Let me allude to just one instance of the influence of this society. While on a visit last autumn to Newton with our esteemed friend, Mr. Ross, in riding through the city we came to one of the school-houses, and much to my surprise and greatly to my gratification, the grounds in front were neatly arranged with beds of flowers, and their appearance showed that they had received good care. Upon expressing great pleasure at this beautiful and unexpected sight, Mr. Ross said, "That is through the influence of our Horticultural Society." Now who can tell what happy influence these flowers have on the minds of the youth who daily meet there in pursuit of knowledge. If we contrast that beautiful school garden, with its handsome trees and lovely flowers, with the surroundings of many of our school-houses, which in winter are skating-ponds, in spring mud-holes, and in summer dust-beds, with not a tree any where near,— I am sure you will exclaim with me, as I in heart said, "God bless the Newton Horticultural Society." Let us all do what we can to get up local societies. It is not necessary to have exhibitions

like those held here, which are visited by many who reside miles away from Boston, and whose business brings them to the city every day. Those held here are sustained much better than can possibly be done by any local society; but we could meet at stated times and discuss such subjects as are of interest to the town or city in which we live.

One word as to what we shall plant, and I will no longer tax your patience. The trees adapted for shade in our streets are few. The American and English elms are favorites, and where they can be protected from the canker worm, which is the only objection, are noble trees and the best adapted of the elms to this purpose. Of maples the rock or sugar maples are best for streets or lawns, and are much sought for, the only objection to them being that they are comparatively slow growers. Aside from this they have no superiors, and are clean, handsome trees. The red and white maple are both good street trees, of rapid growth, and fine symmetrical form, and their autumn hues are unequalled. In speaking of the maples, a writer in one of our journals says that there is a little poetry in "all the colors of the rainbow" as applied to Scottish foliage, even in the zenith of its autumn brilliancy, but here, as every observer knows, especially in the mountainous districts, where sugar maples abound, the expression needs no poetic license. Almost all these colors may be found in this single species, to say nothing of the birches, elms, ashes, and oaks, with their hardly less varied tints. European travellers tell us that it is worth a voyage across the Atlantic to behold the splendors of the ripening foliage of our forests. A visit in the autumn to the thriving village of Maplewood, where the streets are beautifully shaded with very fine specimens of the rock or sugar maple, or indeed any of the towns where this variety is largely used for shade trees, will satisfy you that this is no overdrawn picture. Lindens have been favorites for this purpose, and have been largely used, and in fact in the new town of Linden you may see long rows of them planted through the different streets, which seem to be in a thriving condition. But I should not recommend it for this purpose, as it seems, like the mountain ash, to be subject to the attacks of the borer, and it is not a clean tree. In the village of East Saugus you may see on the inside of a fence, near the railroad station, a row of tulip trees, some eight or ten in number, and I should think forty to

fifty feet high. They are magnificent specimens, and when in flower will well repay any one for the time taken to see them. In an editorial in the "Horticulturist" for 1853, the writer says of this and the *Magnolia acuminata*, that "the whole world does not produce two deciduous trees that surpass them in stateliness and symmetry of form, in ample foliage and superb flowers. But unfortunately both are most difficult to transplant, and especially so at that age and size necessary for a street tree; and neither of them, on this account, can ever be so employed to a considerable extent." For my own use I should choose from sugar or rock maple, red or scarlet maple, and the American or English elm.

As you have already noticed, I have said but little aside from what trees are best adapted for shade on our streets. I hope some gentlemen will give us their experience on subjects akin to this; such as how we shall ornament our gardens, and what is adapted for small places, the best kinds of shrubs, and many other subjects, which, in connection with this, naturally suggest themselves to our minds, and may we not hope that, as there are so many that have practical experience in this branch of horticulture, they will kindly grant us a leaf out of their book, and in so doing give us the information we all need.

Benjamin P. Ware hoped to hear the sycamore leaved maple (*Acer Pseudo-Platanus*) recommended by Mr. Barker. He had found it a rapid grower, making a fine symmetrical head, and valuable as a shade tree.

Mr. Barker replied that it did not succeed with him (at Pine Grove Cemetery, Lynn). Though it grows well during summer, the new growth is killed by the winter.

Mr. Ware said that he had planted it on the sea-shore, and that it had grown finely there, and never winter-killed. He first planted two specimens, which did so well that he ordered several dozen more, which promise to thrive equally well. He also thought highly of the Norway maple for similar situations, for its vigor, hardiness, compact head, holding the leaves late in autumn, and ease of transplanting.

E. W. Buswell planted two sycamore leaved maples twenty years ago in a poor, gravelly soil. They grew with sufficient vigor, and were but slightly injured by the winter.

W. C. Strong had found the sycamore leaved maple apt to be

injured by cold in the winter while in the nursery, but not after they had become established. He would not include the horse chestnut, nor any of the maples, among trees for street planting. He thought there was much force in the objections to trees in city streets, and that great care was needed in city planting, particularly to avoid crowding the trees, so as to shut out the light and air and make the streets muddy. This is especially needful in retentive soils, where the streets are muddy for a long time after a storm, under thick foliaged trees like rock maples. In New Haven, which has been mentioned by the essayist, tree planting in the streets has succeeded, because it has been confined to the elm, which does not produce so dense shade. It behooves us both in street planting and in laying out grounds to recommend sufficient distances. Mr. Strong would plant rock maples and also the Norway maple where the streets are wide enough, and the soil dry enough.

James Cruickshanks had had experience with the sycamore leaved maple, and corroborated what Mr. Barker had said. At Woodlawn Cemetery he had observed that they did well for a year or two and then grew smaller. The tendency to winter-kill is done away with at the sea-shore, if the trees are not so near as to be injured by the spray. Both this and the horse chestnut are too dense for street planting. The elm is the best for this purpose, but they must have room, and you can grow nothing near them. He had measured an elm in Hartford, one hundred and thirty years old, which was thirty-one feet in circumference. Judgment is needed in planting trees in cities, especially in the business portions. A few trees and shrubs will enhance the value of a place more than the same amount expended in any other way. Mr. Cruickshanks thought it would be well to offer a premium for shade and ornamental tree planting.

Charles M. Hovey said that he had been both amused and instructed by what he had heard of the discussion. He did not agree with Mr. Strong in his estimate of the rock maple, and he was surprised that no mention had been made of the silver maple, one of the most desirable trees for shade, of which he (Mr. Hovey) planted a long avenue in 1844. He thought the rock maple the best of all street trees. Instead of making the street muddy they had precisely the opposite effect. Mr. Hovey alluded to a large tree near his own grounds, under which he had often stood for pro-

tection in a shower, and which was planted many years ago. In regard to the distances and thinning of trees, Mr. Hovey mentioned an instance where a neighbor had cut down two out of five large elms, at what appeared to others a great sacrifice, but those left now cover the whole ground, and magnolias and other trees thrive near them. Mr. Hovey opposed the common idea that nothing will grow near elm trees, remarking that they do not root so deeply as many shrubs. He had a row of elm trees 1,100 feet long, and a row of pear trees thriving within fifteen feet, though not as well as if the elm trees were not there. Lilies of the valley thrive under elm trees and bloom abundantly, while under the dense shade of horse chestnuts not even grass will grow. He had seen the sycamore leaved maple flourishing on the sea-shore in Swampscott, and thought it an excellent tree for such exposed places.

Mr. Hovey next spoke of the European linden, alluding to a fine row on Boston Common, the trunks of which were cracked so that on a cold day the hand could be placed in the crack, but when milder the crack became narrower, and during summer was wholly closed. Besides this tendency to crack, an objection to the linden was the aphis with which it is infested, and it was very remarkable that so learned a man as Dr. Hooker supposed the honey-dew caused by the aphis to be an exudation from the tree. Mr. Hovey had planted a row of Scotch elms, silver maples, and lindens, and camellias placed under the lindens became black from exudation of the aphides, which was not the case under the other trees. Until we can get rid of these insects the linden can not be recommended. Otherwise it is a desirable tree.

Mr. Hovey would recommend for street trees the rock maple, but it is difficult to get of good shape, and somewhat difficult to transplant. Next to the rock maple is the silver maple, the wood of which, however, is soft and apt to break in high winds, and the leaves are also somewhat eaten by insects. The Scotch elm resists the canker worm, and grows compactly like the maple. He would recommend the Scotch elm for narrow streets, and the American elm for wide streets, boulevards, and large parks. They should be of uniform shape, though this is difficult to obtain with the American elm, as they run into so many varieties when raised from seed. Although the limbs of the elm grow every way, it is a symmetrical tree. The purple elm and Cornish elm are very

desirable, but as they must be grafted the price in the nursery is higher than of those which can be raised directly from seed.

Mr. Hovey next spoke of the oak, remarking that it is a mistake to think they do not grow as fast as other trees, and referred to a plantation which in ten years grew twice as large as some elms or rock maples in the same time, and although they transplant poorly, in five years the rows were all full. He spoke also of a fastigiate variety of the oak, which, however, is difficult to be had. The oak is a grand tree, but the tulip tree or horse chestnut is preferable in narrow streets.

Mr. Cruickshanks said, in reference to Mr. Hovey's statement that other plants would thrive under elm trees, that he would like to have him dig under an elm tree and see if the ground was not full of roots.

Mr. Hovey admitted that elm trees filled the ground beneath them with roots, but mentioned having tried to dig up some plants of *Lilium superbum* which grew under an elm tree in Plymouth county, and though the ground was so full of roots that he could not get the lilies up, they still grew vigorously there.

Rev. A. B. Muzzey said that if we go on discussing particular trees we shall certainly disagree. There is a lamentable want of shade trees in the streets of our towns and cities, and a surprising indifference to this want among gentlemen of cultivated taste. From the action of our city governments one would think that they had reversed the advice which the Scotch laird gave his son, and desired to be always pulling up a tree. Mr. Muzzey believed that this society might make its influence felt in producing a better state of things. We should be very guarded in our action, but we should see if we cannot do something to encourage the planting of trees. He suggested that a premium should be offered for the best essay on shade trees. In Cambridge, where Mr. Muzzey resides, the sentiment is the same as in Boston, and large trees have been destroyed because they slightly obstructed the sidewalk, but Mr. Muzzey asked whether the shade, the healthiness, and the beauty of the trees were not to be considered, as well as the trouble of taking a step aside. We do not live in this world for utility alone, — beauty is utility. He resided for eight years in Newburyport, and was proud of the trees in that city, the beauty of which was owing in a great measure to a bequest for promoting the production of trees and the improvement of sidewalks.

President Parkman remarked that Mr. Muzzey had touched a subject of very great importance, and one which has engaged the attention of European governments. In many European countries which have been denuded of trees, it is only by very great care that some parts have been preserved in a state of fertility. La Mancha and the valley of the Po are examples, the latter being subject to alternate inundations and droughts.

Mr. Strong agreed with the views expressed by Mr. Muzzey and the President. He did not yield to Mr. Hovey in admiration of the maple, in its place. He wondered that Mr. Hovey should cite a single tree as proof that no dampness was caused by the thick shade of the maple. He knew of rows of maples which had had an exceedingly injurious effect in making the ground damp beneath them, and of rows of horse chestnuts which he should have voted to cut down, if he had lived in the streets where they grew.

Marshall P. Wilder said that he was pleased with Mr. Muzzey's remarks. Countries without trees would become deserts, and he was glad to find a better sentiment than formerly existed, now prevailing, especially in the West, where many towns were offering premiums for forest tree planting. Mr. Wilder referred with commendation to the extensive planting on the line of the Kansas Pacific Railroad, and to the successful planting on the alkaline soils on the Union Pacific Railroad, where, not long since, it was supposed that nothing would grow. It gave him a feeling of pain to see a tree taken down, even when necessary.

John B. Moore said that the streets in Concord, where he resides, were entirely lined with trees. The town chooses a Superintendent of Public Grounds, without salary, but makes an appropriation for the purpose of taking care of the cemeteries and school-house yards. He agreed with Mr. Strong in regard to the maples, and knew of streets which had been made muddy by planting them too closely with maples. He was surprised at Mr. Hovey's statement that the roots of elms do not run deep; he had found the bottoms of cellars filled with them, and had found them in a well twenty-five feet deep. He could grow nothing well under elm trees, but preferred them to any other trees for streets. The rock maple is very beautiful, but they must be planted far enough apart to let in the light and air.

Benjamin G. Smith wished to say a word on the utility of for-

est trees in the winter, derived from experience in his own grounds, which were protected by a belt of evergreens, and where the thermometer ranged five degrees higher than in the grounds of his neighbors in a similar location, but exposed to the wind.

President Parkman said we must regard circumstances in planting. Where forestry has been made a study and a profession, trees are planted only on streets of a certain width, and distances are carefully studied and proportioned to the size of the trees and the width of streets. As remarked by Mr. Moore, trees are often planted too closely,— Elliot street, Jamaica Plain, near Mr. Parkman's residence, was an instance, and every alternate tree was taken out.

Mr. Hovey said in answer to an inquiry as to the cause of the red maple dying at the top, that it was from want of moisture, the species growing naturally in swamps. The borer mentioned in Mr. Barker's paper as injurious to the linden, differs from that infesting the apple tree here. It can be kept down, but not easily. Mr. Hovey accounted for the general propensity to cut down trees as a hereditary trait, caused by the circumstances under which New England was settled. On the prairies a man could look from his door for miles without seeing a tree, and he naturally felt the want of them; but here the country was thickly wooded, and the traditional Yankee feared an Indian skulking behind every tree. Mr. Hovey said that he had so far inherited this feeling that when he was a boy and had occasion to pass some pine woods, he looked for a robber behind every tree. The early settlers did not want to plant pine trees, but to get rid of them, and that object has been so far accomplished that now we feel the want of them, and have come back to the necessity for planting.

James Cruickshanks spoke of the sanitary benefit of trees, and of the advantage of planting them where, as in certain regions in Egypt, no rain fell from one year's end to another, but after the planting of a large number of trees, from fifteen to eighteen inches of rain fell annually.

The Chairman of the Committee on Discussion announced that next Saturday William Gray, Jr., would read a paper on the general culture of Pelargoniums for bedding, with select lists of the best varieties.

MEETING FOR DISCUSSION.

Saturday, January 30, 1875.

The Chairman of the Committee on Publication and Discussion submitted a code of rules for the government of the meetings, which were unanimously adopted.

Rules of the Meetings for Discussion.

1. An assigned subject shall be first in order, to be opened, as far as may be practicable, by a written essay not exceeding half an hour in length, except by consent of the Committee on Discussions.
2. A public discussion upon the subject of the essay shall follow, each speaker being limited to ten minutes and not speaking more than once, except by express vote of the Society.
3. Contributions on exhibition may be presented and remarks made, each speaker being limited to ten minutes on each specimen.
4. Any new subject having the approval of the Committee on Discussions may be presented, subject to the previous rules.
5. It shall be the duty of the President to enforce these rules.

The essayist to-day was William Gray, Jr., who said that he had intended to read a paper on Geraniums, but a question had arisen as to the proper designation of the plants commonly cultivated under that name. The most sensible thing he had seen on the subject was in the introduction to "A Monograph of the Genus Geranium," by H. C. Andrews, who said that he "should ever place the whole tribe under the title Geranium, regarding every unnecessary increase of genera as the direct road to confusion." Mr. Gray suggested that the society should discuss the subject, and adopt the correct name. He illustrated his remarks on the difficulty of getting up plants of the new tricolor varieties, by specimens in pots exhibited on the table before him. The paper was as follows: —

Pelargoniums, — Their Culture and Varieties.

BY WILLIAM GRAY, JR.

The subject proposed for discussion to-day is, the Pelargonium, and first I shall take the tricolored section. Whoever can grow

these well will have no difficulty in managing the others; and, I think I might add, all other kinds of plants, requiring, as they do, perfect drainage, pots not too large, and the greatest care in watering; in fact the last point is the critical test of a gardener; a man who can water plants with judgment has little more to learn in his profession.

Tricolors have been in such demand in England that every shoot, as soon as it appeared, has been taken off for striking, and the result is that the parent stock has been enfeebled, and in many cases killed outright; the young plants go through the same process, and, until the supply overtakes the demand, and the price falls, there is no chance of getting them of any strength; in my experience about one-half have died on the voyage here. If they arrive alive they should be shaken out, put into small pots which should be plunged in spent hops, and watered with extreme care until they begin to grow; if you are fortunate, in a year from the time they come you can get one good cutting from each, and these cuttings properly treated will make good plants; the imported plant, from its weakness, and from becoming hard and stunted in its early growth, cannot be depended on to make a good specimen.

In March take the cutting off, strike it in mild bottom heat, and, as soon as rooted, put it in a two-inch pot, to be plunged as before; shift it from time to time by small shifts as the pots get filled with roots; the point can be pinched out when the first shift is made; never let it get a check until it is time to give it rest, which will be about the middle of June, then gradually withhold water to ripen and harden the wood, and about the middle of August shake the roots entirely out, and pot in as small a pot as will hold them without much cramping. The plants are benefited by being out of doors during June, July, and August, but should be kept plunged to prevent evaporation, and sashes should always be put over them in wet weather; care should also be taken that worms cannot get into the pots. Tricolors do not keep their bright color and do well without this season of rest.

For soil I use two parts loam (pieces of sod with the grass just dead when I can get them) in as rough a state as possible, one part thoroughly rotted manure and one of coarse sand. I keep all soil for potting in small heaps, or in ridges about a foot high and eighteen inches wide; it has always seemed to me a mistake, after taking the pains to get the best of the top soil of a pasture for this

purpose, to stack it up, as is often done, four or more feet in height in large compact masses, that it may lose exactly the properties gained by its long exposure to air and light, which give it so much of its value.

Training should begin in the second year, and consists merely in bending down and tying the shoots close to the rim of the pot, and occasionally stopping a gross one; the centre soon fills up, and the foundation of a specimen is laid, which, with but little care, will increase in size year by year. I have found small lead weights, hung to the shoots, an effective way of keeping them down after they have grown beyond the rims of their pots. More care is necessary in tying out bronze and green pelargoniums than the tricolors, as the growth is stronger and more brittle; here again weights are useful; by beginning with light ones, and replacing them by degrees with heavier ones, the branches are gradually brought into place without breaking; another advantage is that all the weights can be removed when plants are wanted for exhibition, and they can be shown without the defacing sticks and ties which often accompany them.

To sum up; in order to have good tricolors it is necessary to start with a strong cutting, to grow it in a night temperature of about 50° in winter, rising to 60° in the daytime by fire heat, and to 75° or higher by sun heat, with plenty of air; to give repeated small shifts; to be careful in watering and training, and to see that it has a rest of a couple of months in each year; the water should be at least as warm as the house, and ten degrees higher will do no harm. The flower buds should always be cut off as soon as they appear.

I can add but little in regard to the other classes; they need more water, rather a stronger and more firmly packed soil, and will do fairly well under treatment that would kill the more delicate tricolors; they should have their annual rest and be shaken out and repotted, but larger shifts are safe for them. The flowering ones should be pinched from time to time, and if a full bloom is required, it will help them much to take off the flower buds until from six weeks to two months before the time at which they are wanted; all pinching of shoots should be stopped at least ten weeks before the plants are required to be in perfection.

The best golden tricolors are,—

Achievement,
Ealing Rival,
E. R. Benyon,
Howarth Ashton,
Lady Cullum,
Lady Sheffield,
Lucy Grieve,
Macbeth,
Miss Batters,
Miss Goring,
Mrs. Dunnett,
Mrs. Grieve,
Mrs. Little,
Mrs. Turner,
Peter Grieve,
Prince of Wales,
Princess of Wales,
Reynolds Hole.

The best silver ones are,—

Eva Fish,
Excellent,
Lady D. Neville,
Lass o' Gowrie,
Mrs. Clutton,
Mrs. Laing,
Princess Beatrice.

The difficulty of getting a flat leaf in this class, from the fact that the green centre grows so much faster than the white edge, has seemed insurmountable; but a plant has been lately sent out by Mr. Morris which is claimed "to be the nearest approach to perfection of any variety yet introduced," and, from seeing it in its young state, I think the claim well founded.

The best Bronzes are,—

Black Douglas,
Chieftain,
Earl of Rosslyn,
Emperor of Brazil,
Marechal McMahon,
Mrs. Harrison Weir,
Mrs. John Lee,
Prince Arthur,
Reine Victoria,
Rev. C. P. Peach,
W. E. Gumbleton,
W. R. Morris.

The flowering Zonals are so numerous that it is difficult to make a selection, but the following are the best that I have tried in their respective sections: —

Round-flowering Scarlets,—

Beauty of Waltham,
Cœur de Lion,
Coleshill,
Congress,
Corsair,
Diana,
Emily Morland,
Hospitalité Suisse,
Incomparable,
Lord Derby,

Lord Mayo,
Majestic,
Mercy Grogan,
Omega,
Orbiculatum,
Rev. A. Newby,
Sir Charles Napier,
Sir John Moore,
Tyersall Rival,
Vanguard,
Vesuvius.

Scarlet shaded with rose,—

Æstival,
Christian Deegin,
Circulator,
Crystal Palace Gem,
E. J. Lowe,
Florence,
Professor Lawson,
Renown.

Scarlet shaded with purple,—

Ianthe,
Madame Mezard,
Peabody,
Shade of Evening,
T. Hammersly.

Salmon Scarlet,—

E. S. Dodwell,
King of Roses,
Paul Brie.

Pink,—

Master Christine,
Mrs. Keeler,
Rose Rendatler.

Salmon,—

Acme,
Albert Grevy,
Gloire de Corbeny,
Mme. Jean Sisley,
Polly King,
President Thiers.

White,—

Mme. F. Hoch,
Mrs. Sach,
White Clipper,
White Princess,
White Wonder.

White with rose centres, the loveliest class grown,—

Alice Spencer,
Madame Werle,
Marguerite Panton,
Miss Gladstone,
Remus,
The Bride.

Of Hybrid Nosegays, which have been making great strides of late, the best Scarlets are,—

Dr. Muret,
Emilio Castelar,
Jessica,
Sunshine,
Wellington.

Rose,—

Caven Fox,
Cherry Lips,
Florence Durand,
Lawrence Heywood,
Mrs. Masters.

Pink,—

Christine Nilsson,
Delight,
Lady Belper,
M. E. Buenzod,
Mrs. F. Burnaby,
Pink May Queen.

It has been questioned whether much further improvement is to be expected in these various classes; it may be slower than in the past few years, but I think in the hands of such careful growers as Dr. Denny, Mr. Pearson of Chilwell, Mr. George, and many others, it is sure to come. We may never see a more dazzling scarlet than Jean Sisley, a plant of better habit than Orbiculatum, or of finer foliage than Mme. Werle; but, until these various excellencies are all combined, by careful breeding, in one variety, I think it safe to say that the limit has not been reached.

Bedding Pelargoniums.

It has been the custom in England to separate those suitable for bedding from those best adapted to pot culture, and I suppose with good reason; but if desirable there, I do not think it so here; they use largely the narrow-petalled nosegay section, of which Waltham Seedling and Violet Hill are types, keeping the round-flowering zonals and the superb hybrid nosegays for cultivation under glass. Doubtless these two kinds, with Vesta, Star of Fire, and many others, will make a more brilliant show in some one week of the summer than any other class, but in our climate it is at the expense of the rest of the season. I prefer to use kinds less free but more constant in their flowering, of which the flowers are perfect in form and color, and have found that some of the best for pots are also the best for bedding.

Orbiculatum, Sir John Moore, Coleshill, Wellington, Douglas

Pearson, and Sir Charles Napier are the best among the scarlets, and to these must be added, for large beds, Gen. Grant. For pinks I recommend but two, Master Christine and Pink May Queen.

There are no white-flowering varieties fit for bedding, but their place is well supplied by the white-edged Albion Cliffs, which is far in advance of any yet tried by me.

In the golden-leaved section, Crystal Palace Gem still holds the first place.

Of bronzes the Moor is the best; Harold, the Earl of Rosslyn, and the Marquis of Lorne are next, but at a long interval; the others which have been tried by me, and which can stand our sun, grow too strongly and "run to green."

There are no silver tricolors worth growing for bedding. Of the golden ones Mrs. Pollock is the best, perhaps because that kind is plentiful and cheap, and has had a chance to get some strength; partly also, I think, owing to the light color of its leaf, which enables it to stand the sun better than those with darker zones.

A single word about arrangement in planting. I think the simpler the form of the beds the better, and that, if small, they should be filled with plants of a single kind. If large, they should have an edging of another kind, of a different color; or of a different plant, such as golden pyrethrum, variegated alyssum, or a dwarf coleus like the Emperor Napoleon.

Having had no experience with the newer double ones I cannot include them in these remarks.

W. C. Strong said that though there were some points in regard to which he did not quite agree with Mr. Gray, he yet felt that Mr. Gray was so good authority that he did not like to differ from him. He had seen in England and Scotland such specimens of tricolors as not even Mr. Gray's would compare with. They were very large plants, and he was under the impression that our hot suns were so unfavorable to the tricolors that it is difficult to produce such plants here

Mr. Gray believed that the plants mentioned by Mr. Strong were of several years' growth. He agreed with Mr. Strong so far as regards plants out of doors, but in houses we can control the heat and light. He shook the soil out in potting.

H. Weld Fuller said that he saw at Mr. Hunnewell's a circle of

the Earl of Rosslyn, mentioned by Mr. Gray, which bore exposure well and excited great admiration. He spoke with the highest approval of Mr. Gray's system of annotation, in a book ruled with columns for the names, dates of planting, dates of flowering, and value or worthlessness of the different varieties, so as to give at a glance a perfect view of the daily condition, flowering, and desirability of every kind. Mr. Gray imported four hundred and fifty varieties last year, out of which he will probably throw away four hundred, preserving only the elect.

Mr. Gray said, in answer to the President, that he had made his selections from eight hundred green foliaged, flowering varieties, and two hundred and fifty tricolored. He added that he would like to have some gentleman who understood the difference between the *Pelargonium*, *Geranium*, and *Erodium*, state it succinctly.

E. S. Rand, Jr., read from "Tilton's Journal of Horticulture," vol. iv. p. 89,— "Pelargoniums are known in gardens as geraniums, but are very different from them in their spurred calyx, usually irregular corolla, and the number of perfect stamens, which varies from seven down to four. The Geraniums are distinguished by having regular flowers, ten stamens with the filaments united at the base, and five carpels, each tipped by a long glabrous arm (the persistent style), which becomes recurved when it separates from the central axis."

Charles M. Hovey said that Mr. Gray had given us much valuable information that we could hardly have got from any one else. In regard to splendid specimen plants the question of their production is simply one of time, labor, and expense. They require much attention, and more room than most cultivators can afford, in order to give the necessary circulation of air. Although it generally requires two years to get a decent specimen, he knew of a gentleman who grew a plant two feet in diameter in ten months. An imported plant, like the Princess of Wales, shown by Mr. Gray, becomes sickly and stunted like an old pear tree. An English gardener would take this plant, and from a cutting would raise a large plant in a short time. It is unnecessary to point out the difference between the Pelargonium and Geranium, but there is a difference, as there is between the *Cydonia Japonica* and the *Pyrus malus*. He would continue to use the old and familiar name of Geranium. The geraniums of the botanists are our native species.

Mr. Strong asked whether we can imitate the climate of England.

Mr. Hovey replied that the pelargonium was a native of a hot climate. They are now making their growth, and will look best from this time until May, while receiving the influence of the returning sun. In England they are placed away after exhibition to rest, but we repot with the hope of getting a great plant, and by continuous watering and forcing they are nearly ruined. They should be dried off somewhat, and rested like bulbous plants; the roots die or are exhausted when they are allowed to grow continuously.

Mr. Hovey alluded to the Pelargonium Society, lately formed in England, and said that Mr. Beaton was the first to attempt the improvement of this class of plants. Mr. Paul raised Mrs. William Paul. Other growers were Denny, George, Pearson, Sisley, and Lemoine, the last named having originated the new double varieties. Few seedlings had been raised in this country, though some had been exhibited. Leonidas was one of the parents of many cross-bred varieties. He hoped Mr. Gray and other cultivators would raise seedlings, for we ought not to be wholly dependent upon foreign growers. The seedlings would be good, and valuable to the originator for planting out, even if not worthy of being named and sold.

Marshall P. Wilder thought Mr. Gray's paper an honor to the Society. In his judgment the Society should decide the question of name, and it would be a point gained. A similar case is that of the *Dracænas* and *Cordylines*, all the plants known to gardeners as Dracænas being classed by botanists as Cordylines.

Mr. Gray did not agree with Mr. Hovey when he said that it is simple and easy to raise good seedlings. We are over-run with poor varieties, and no grower should send out one unless it is better in some point than any other.

President Parkman said that the difficulty of deciding upon the proper name for these plants arose from the fact that we look at them from both horticultural and botanical points of view, and asked whether any horticultural distinction could be made, similar to that of the Bourbon, Bengal, and other classes among the roses.

Mr. Rand thought the two cases were not parallel, and that if possible we should make the horticultural and botanical views coincide.

Mr. Gray said that the simplest distinction of the pelargonium is that it has but seven stamens. The plants which we cultivate are pelargoniums and not geraniums.

John B. Moore thought it was desirable to have the name settled. The true name is pelargonium, but the public have used the wrong name, and some propose to continue it.

James Cruickshanks said that in his younger days there was but a very short list of geraniums and pelargoniums. The first seedling was raised by a Mr. Henderson; it was a cross between *Pelargonium sanguineum* and a greenhouse variety. Climate has a great deal to do with color; in our hot suns they can never be so distinct in color as in a cooler climate.

Mr. Wilder remarked that at the time mentioned by Mr. Cruickshanks, hybridization was very little understood. Herbert, the best authority on the subject, had not then written.

Mr. Rand thought the society owed it to themselves and the public to decide on the name of these plants. He moved that they be called pelargoniums.

Mr. Hovey said that the question of name had assumed an important aspect. He asked whether a single hybrid had been raised between the tuberous rooted species from the Cape of Good Hope and the Zonales. He believed that they would not breed together; he had tried many species, but could not breed them; botanists were divided in opinion on the subject.

Mr. Gray believed that Mr. Hovey was mistaken. He thought that crosses had been made, though none were known with absolute certainty. The *Pelargonium inquinans* is the parent of all these plants, they all come from pelargoniums, and there is no geranium blood in them.

Denys Zirngiebel remarked that it is generally admitted by the trade, and especially by French florists, that the plants in question should be called pelargoniums.

Mr. Rand re-stated his motion that the plants cultivated by florists as geraniums be called pelargoniums, and on putting the question it was decided in the affirmative.

Mr. Rand called attention to a plant of *Cœlogyne cristata* exhibited by him. He had found it far more easily grown than is commonly supposed, having four or five plants in the orchid house, and this one in the greenhouse, where it was watered and treated

just like the pelargoniums, and it is twice as good as any of the others.

The Chairman of the Committee on Discussion announced for next Saturday a paper on Cryptogamic Plants, by John Robinson.

BUSINESS MEETING.

Saturday, February 6, 1875.

An adjourned meeting of the society was holden at 11 o'clock, President Parkman in the chair.

George W. Pratt, from the Garden Committee, reported the organization of that committee by the choice of William Gray, Jr., as chairman.

John Robinson, from the Library Committee, reported that that committee had organized by the choice of Edward S. Rand, Jr., as chairman.

Voted, That a committee of nine be appointed by the President, of which he shall be chairman, to examine the By-Laws of the society, and report what changes therein are desirable.

The chair appointed Charles O. Whitmore, Charles M. Hovey, William Gray, Jr., Robert Manning, James Cruickshanks, Edward S. Rand, Jr., John C. Hovey, and William C. Strong.

Voted, That a committee of five be appointed to consider the expediency of a public entertainment at the close of the annual exhibition of the present year, and, if considered expedient, to report a plan therefor.

The chair appointed Charles H. B. Breck, Charles M. Hovey, Charles O. Whitmore, Marshall P. Wilder, and William Gray, Jr.

The following named persons were elected to membership: —

Augustus S. Perkins, of Boston.
Miss Clara L. Dove, of Andover.
Edward Gray, of Boston.
Mrs. Livia P. Flint, of Newton.
George S. Harwood, of Newton.

Adjourned to the first Saturday in March.

MEETING FOR DISCUSSION.

The meeting was opened with the following paper: —

Cryptogamia in Cultivation.

BY JOHN ROBINSON.

The subject of *Cryptogamia*, embracing as it does the larger part of vegetation, both in quantity of specimens and in number of species, is one that can hardly be treated very definitely in a single hour, therefore we will briefly notice various families and orders, dwelling particularly upon those where the species are used in cultivation.

A very simple and clear distinction between a flowering plant and a cryptogam is that the former is produced from a seed, while the latter is produced from a spore. If we open a seed we shall see, more or less clearly defined, a miniature plant. A seed is rarely so small as not readily to be seen by the naked eye, while a spore is rarely large enough to be seen without a lens, and contains no definite form within. In germination a seed grows directly into a plant like the one by which it was produced, while the spore rarely does,— some fungi, for instance, passing through as many as five or six stages before reproducing a plant similar to the first. This has been likened to some insect reproduction, the egg of a butterfly, for instance, producing a caterpillar which goes through certain changes to produce a butterfly similar to the one that deposited the egg. This fact is familiar to every one, and yet almost every cryptogam, growing from a spore, goes through about the same, or even more changes, while few persons realize it. The name cryptogam signifies "concealed marriage;" it was suggested by Linnæus (as every book on the subject tells us), who, although he could not find any sexual action in these plants, felt confident there must be such; and the discoveries of modern botanists have beautifully verified this supposition.

Glancing at the orders of this group, beginning with the lowest, we have first the *Diatoms*. These are plants consisting of a single cell, and, owing to the capability of free motion, were for a long time considered as animals, but are now placed as the lowest order of plants. They are all microscopic, and are found in nearly

every body of water; they have an indestructible coating of silica, and form in such quantities as to make thick deposits. The city of Richmond, Va., is built upon a bed of diatoms, eighteen feet thick. The polishing powder of domestic use, known as Tripoli, is composed entirely of the fossil remains of these plants.

Algæ grow in salt water and in fresh. They have both a very simple and a very complicated mode of reproduction. Some species are wholly microscopic, while others are the largest vegetables in the world; one, a species of *Microcystis*, growing off the California shore, would, if in the air instead of the water, tower more than one hundred feet above the tallest Sequoia in the Calaveras grove. A single plant of another sea-weed, by its great and branching growth, is sufficient to entirely obstruct navigation in channels otherwise deep enough to float many of the largest vessels. The Sargasso sea, so called, near the centre of the North Atlantic Ocean, is 260,000 square miles in extent, and is covered with but a single species of sea-weed. Many of the Algæ are very beautiful, but are not cultivated to any extent, except perhaps in some of the European aquaria.

Fungi are more numerous than the Algæ in number of species, but the plants are smaller, a majority of them being microscopic, as for instance the wheat smut, potato rot, bread mould, etc. Some of the larger species are cultivated for the table, one of which has been exhibited in this room. Fungi are very complicated in their reproduction, and grow with great rapidity, but are credited with a more rapid growth in many instances than is due them, as the root-like mycelium may have been growing a long time unobserved before the fruiting portion, the only part generally noticed, makes its appearance.

Lichens are now the subject of a botanical dispute; they grow upon wood and rocks, and are used only in cultivation as an ornament to the fernery.

Mosses and *Hepaticæ* are also familiar objects. Single specimens of the mosses are very minute, yet by their vast quantity they cover often an extended area, contributing a beautiful effect to the fernery or grotto, and are in nature a most pleasing object. They are also invaluable to the florist for various economic purposes.

Of the *Lycopods* the genus *Selaginella* is the only one much cultivated. The allied genera *Lycopodium* and *Selaginella* have

been much confused; they are distinguished by their different modes of fruiting. We will consider their cultivation farther on, in connection with the ferns, but I would here suggest, as a topic for discussion, the question why it is that the Lycopodiums are cultivated only with great difficulty, while the Selaginellas are managed with the greatest ease. *Marsilia quadrifolia*, a native of Connecticut, has been cultivated at the Botanic Garden, and has become established in ponds in this vicinity; the leaves resemble those of an oxalis; they float upon the water, the spores being at their bases. The plant is perfectly hardy, very pretty, and grows quite rapidly.

Equisetums, or Horse-tails, are an interesting and neglected genus. For out-door work nothing can be better, for certain effects, than the *E. sylvaticum*. It is not rare in our woods, and can be transplanted without much difficulty. It is already in use in England, and why not here? Other species of *Equisetum* are good, but none compare with this among our natives; it grows from twelve to eighteen inches high.

Ferns are more largely represented in cultivation than all other cryptogams; they vary in size from some species of *Trichomanes*, which are not half an inch high, to the noble *Dicksonia antarctica*, which attains a height of from sixty to eighty feet, with a spreading crown more than one hundred feet in circumference, yet in each of these extreme cases they grow from spores, which, even under the microscope, show but a very slight difference in form. A few notes on the introduction and cultivation of exotic ferns in Europe may be interesting.

The first species taken to England were *Cystopteris bulbifera* and *Adiantum pedatum*. They were carried thither from Virginia by John Tradescant, in 1628. Two other American species, *Onoclea sensibilis* and *Camptosorus rhizophyllus*, were introduced prior to the year 1700.

In 1768 there were at Kew 10 exotic species.
" 1789 " " " " 34 " "
" 1813 " " " " 83, at Berlin 30.
" 1822 " " " " 40, " " 91.
" 1846 " " " " 384.

In 1850, eight hundred and fifty species were under cultivation in Europe, and in 1866 more than a thousand at Kew alone. To

Sir W. J. Hooker and his associates belongs the credit of so great an increase during the later years. I cannot learn exactly how many are now under cultivation in America; probably from six hundred to eight hundred species.

The habit of making so great account of mere varieties as is now the custom in England, seems absurd and wrong. Almost every extended list describes over fifty varieties of some single species; probably the majority of these are abortive, malformed, ungraceful plants, religiously cared for and perpetuated, yet entirely unworthy of a place in any conservatory. Why should these be preserved any more than an unhealthy or malformed pelargonium or fuchsia? It is certainly not in accordance with the true spirit of improvement in cultivation that these are kept. There are variations of species, however, of great merit, as the *Adiantum Farleyense* and var. *cristata* of *Aspidium Filix-mas*, besides many others.

We cannot, in cultivating ferns, do better than to look at nature. I know but one fern that will grow with its root, or rather its rhizome, under water; they need a plentiful supply, but must have perfect drainage; if in pots or pans, for the more delicate kinds one third of the pot should be filled with finely broken crocks, with a bit of dry moss on top to prevent the earth washing through to clog the drainage.

The soil which is acknowledged to be the best for general use is about one part river sand, one part virgin loam, and two parts leaf-mould or peat, not made too fine. I have never tried manure, nor can I find any notice of its being used, except in one instance when well decomposed stable manure was tried with success. An even temperature, avoiding drafts, and a humid atmosphere, are to be desired for the tropical fern house; the house itself to be sunk below ground, and to face any way but south. The water shedding pinnules of the species of *Adiantum* suggest that showering the top of the plants is unnecessary, and I find by a slight personal experience that this is true, as has also been found the case at the Kew gardens, according to the reports. The necessary dampness may be kept up by having wet sand on the benches, and by sprinkling the ground as well. Many species of *Gymnogramme*, *Notholæna*, *Cheilanthes*, and *Pellæa* grow in exposed situations, and will endure drought and the direct rays of the sun. Some may be treated as severely as a cactus, while most species of *Asplenium*,

Adiantum, and tropical ferns generally, would be killed if treated in the same way. Species of *Trichomanes*, *Todea*, and *Hymenophyllum* require, in any ordinary house, a bell glass for extra protection, and should be placed in the darkest corner.

Ferns which are reproduced most readily from spores are seldom easily divided at the crown, while those with a creeping rhizome, that may be quickly separated, are seldom abundantly produced from spores.

In raising ferns from spores, many ways are advocated; doubtless all are good enough, the great requisites being warmth and plenty of moisture; it is well to have the earth upon which the spores are sown made firm, and a few broken pieces of pots crowded into it. Of course water should not be dashed upon the place where planted, as the spores would be washed away. In most fern houses the air is full of the spores; we breathe them without knowing it, and they will select a congenial spot, often growing without troubling us to plant them.

Very pretty effects are produced by growing ferns in cocoanut shells, wire baskets, and hollow stumps. Some species of *Adiantum*, *Blechnum*, etc., form underground crowns, which will appear wherever there is an opening in the side or bottom of the basket in which they are grown, finally covering the whole with foliage.

For the moss-lined wire basket, the *Davallia* is best. The *Platycerium* (Stag-horn fern) will make a fine ornament for a stump; it requires but little earth, as it is almost epiphytic in habit.

In the Wardian case, the smaller growing species of ferns are most desirable. The Selaginellas are invaluable here, as they seem to prefer this confined life to the more exposed greenhouse; they like a soil suitable for most ferns, and owing to their habits need but slight depth of earth.

The subject of Ferneries might well occupy an entire morning for its discussion. Suffice it to say, that the fatal mistakes made in constructing a fernery for the parlor are, to have too much wood work, and too large-growing plants for the height of the glass.

With the climbing and arborescent species, or with the natural cultivation of ferns under glass, I have had no experience, but trust we may hear from those who have.

For out-door cultivation our native species are about all we can

use. I do not know of any species other than North American used in out-door cultivation in this region; doubtless there may be a few that would do well, natives of China, Japan, and Northern Europe. A very interesting paper on the "Geographical Distribution of American Ferns" has just appeared in the "Bulletin of the Torrey Botanical Club," from J. H. Redfield, which may give us light upon this subject, and perhaps show us where to look for ferns to cultivate out of doors. It has always been a surprise that more of our hardy ferns should not be used as borders to lawns and at the edges of groups of trees and shrubbery, especially where there is a northern exposure. Such species as *Struthiopteris Germanica* (growing six feet high), *Onoclea sensibilis* (two feet), *Aspidium spinulosum* (three feet), *A. cristatum* (three feet), *Asplenium thelypteroides* (three feet), *A. Filix-fœmina* (three feet), all the *Osmundas* (three to four feet), *Dicksonia* (two to three feet), and many others, would be most beautiful in such situations, particularly *Osmunda Claytoniana*, the fertile fronds of which, with their dark bunches of fruits, form a most beautiful contrast to the light green sterile ones which grow in a whorl around them. *Aspidium marginale*, *Phegopteris* (two species), *Asplenium* (two or three species), *Woodsia* (two species), *Polypodium*, and some others, are useful on the rock-work. I have about thirty species of natives, cultivated in an odd corner out-of-doors, where they serve as a screen before an ugly fence, require no attention (except perhaps to be watered during an extended drought), and are a source of great pleasure to myself and friends. I wish this branch of fern culture might receive more attention.

Ferns are troubled with as many pests as most plants, not even the hardy ones escaping. The green fly is of little consequence, as it is easily kept out of any well-regulated house. The various scales are more to be dreaded, as they often increase unobserved for a long time on the under side of a frond. The thrip is very hard to kill out when once established; it is most likely to attack plants which are in a temperature higher than their natural one. The red spider will be kept down, as with the roses, by syringing. Various slugs and even the currant worm will attack the out-door species, and another cryptogamous plant, a fungus, is often found on the fronds of ferns, imitating by its shape and position the fructification of the fern itself.

In regard to nomenclature, the many synonyms found among

the names of ferns prove troublesome in correctly labelling a collection; there are also many garden names which have been given to plants apparently without authority, and which add to the confusion. As there are but few known hybrids, and as the origin of almost all the varieties now cultivated can be decided, it is much easier to name ferns correctly than it is many other classes of plants that are the result of much hybridization and long cultivation; therefore it would seem to be the duty of all such societies as this to recognize but one name, and that the correct one. Thus by a joint and continued action with other societies one system of correct names would come into use, saving much confusion to future cultivators.

As an illustration of this point I may mention that at the last exhibition at Music Hall, in the same collection were two fine specimens of Selaginella growing in pans; one was ticketed *Lycopodium densum*, the other *Selaginella densa*. These are of course the same name, and both plants were, without doubt, *Selaginella apus*, a native of North America, from which the cultivated plant does not seem to vary.

A. P. Calder said that two years ago he planted a fern house one hundred and twenty feet by ten, and that he had used cow manure for the plants, which were thriving finely, as gentlemen present could testify. He had found this manure indispensable for all plants, but particularly for ferns. He used it only when thoroughly rotted, and made a compost of one half cow manure, and the other half soil from the woods.

Mr. Robinson knew no reason why manure should not be beneficial to ferns, though the books generally advise not to use it.

William C. Strong agreed with the essayist that it is surprising that ferns are not more cultivated. No plants produce finer effects on the lawn.

Edward S. Rand, Jr., spoke of the readiness with which ferns propagate. In the orchid house the spores floating in the air grow in the baskets of orchids, and have to be weeded out. *Gymnogramme chrysophylla*, especially, propagates with the greatest freedom. He had grown in the ordinary dry atmosphere of a dwelling house four species, *Nephrolepis exaltata*, *Adiantum cuneatum*, *Pteris tremula*, and *Pteris Cretica albo-lineatá*. *Pteris serrulata*, which is a nuisance in the hothouse on account of its seeding so freely in every direction, cannot be grown in the parlor.

Marshall P. Wilder had found *Lomaria gibba* growing in his pits in the same way.

George E. Davenport said that although he had collected and studied ferns in the woods and fields, he had never had much experience in their cultivation, not having the facilities of garden or greenhouse, but he was surprised that more attention was not given to the cultivation of our native ferns by those who had. He had seen a line of *Osmunda cinnamomea* that produced a fine effect, and thought that this and the other species of this truly regal fern might be grown as an edging with great advantage. From a recent experience with the rare Hart's-tongue fern (*Scolopendrium vulgare*), he thought that many of our native ferns might be grown in pots as window plants for the house with ordinary care.

Charles M. Hovey said that he had been much pleased with Mr. Robinson's paper, and that the subject had been too much ignored. The reason that Mr. Calder had found manure beneficial to his ferns was that he cultivated them in the ground, while English cultivators rarely do. The whole style of cultivation of many plants is different in this country from that adopted in England. Thus one English cultivator has twelve hundred pinks in pots, while we put them in the ground, as we do bouvardias also. Manure is not generally applied to camellias, but Mr. Hovey had read of a gardener who had charge of a collection planted in the ground, and dug in manure every year, and they flourished and filled the house. When much manure is used in pots the soil becomes sodden. Manure would, no doubt, be good for ferns when planted in the ground, and old cow manure, from its cooling nature, would be best. Mr. Calder counteracts any ill effects of manure by the use of lime and charcoal. Ferns naturally flourish best by the sides of brooks. Our native ferns, *Onocleas*, *Dicksonia*, etc., grew naturally in Mr. Hovey's grounds, and, though thoroughly taken out twenty-five years ago, they spring up again whenever the ground is left uncultivated for three or four years, showing that the millions of spores retain their vitality, and grow when the circumstances are favorable. There is no need to cover with glass when fern spores are sown. A gardener of his acquaintance threw fruiting fronds into the water tank and the ferns grew up in the pots watered from it, so that in fact they were weeds. He (Mr. Hovey) had recently erected a fernery, where the ferns are planted

naturally among rocks. The smaller kinds are commonly grown in sphagnum moss, confined to the sides of the fern house by wire netting, but large plants must have more room, and do better in the ground. Our native ferns, such as *Adiantum pedatum*, *Lygodium palmatum*, and *Aspidiums*, are very beautiful. Those which as Mr. Robinson has stated, like *Gymnogramme Peruviana* and *Cheilanthes hirta Ellisiana*, do not flourish in the damp which suits others, but require a dryer atmosphere, may be grown with due care in dwelling houses. All the *Adiantums* repel water from the foliage, but still flourish in a moist atmosphere, set on wet moss. He thought the crested and other varieties of ferns worthy of cultivation for their curiosity. A young beginner often finds it difficult to name his plants correctly. From an article in "The Garden" (vol. vii., p. 60,) it appeared probable that they can be fertilized with a camel's hair pencil before they grow. Many kinds, among which is the *Adiantum Farleyense*, do not produce spores, but appear to be mules, and can be propagated only by division of the roots.

Mr. Robinson said that he had not seen the article mentioned by Mr. Hovey, but would dislike exceedingly to undertake the job of fertilizing with a camel's hair pencil, as every prothallus may contain a dozen each of archegonia and antheridia, so small as to be difficult to see with a quarter-inch objective.

E. W. Buswell said that as librarian he had an opportunity to judge of the interest felt in the subject under discussion. For the last two years the books on Cryptogamia had been more used than ever before. He wished to hear of the localities of our native ferns, and of the danger of exterminating certain species, such as the *Lygodium palmatum*.

Mr. Davenport said that Mr. Buswell's inquiry had opened up a subject that ought to interest all who care for the preservation of our native plants. The climbing fern (*Lygodium palmatum*), alluded to, is hawked about our streets every year in great quantities, and is in danger of being extirpated through the greed of traffickers. He had so great a repugnance to encouraging a traffic that is destroying this very beautiful fern that he had never purchased any, though frequently needing specimens for botanical exchanges. With proper restrictions the traffic might be rescued from this danger, and made subservient to refinement and beauty without diminishing the number of plants, but as at present conducted it is

only a question of time when this graceful fern shall cease to exist in Massachusetts.

Mr. Buswell remarked that members of the society interested in the preservation of this class of plants had taken pains to plant roots and spores of the rarer species of ferns, and seeds of flowering plants, in out of the way places for the purpose of keeping them from extermination, and he hoped to hear from some of these gentlemen.

Mr. Robinson said that in Connecticut a law had been passed forbidding the gathering of *Lygodium palmatum*. The fronds are annual, and may be gathered in August without injury.

E. H. Hitchings said that when collecting ferns he had scattered spores in favorable places, and had also planted roots and seeds of the rarer native flowers.

W. H. Halliday wished to inquire whether the close cutting of the fronds had a tendency to exterminate ferns. He stated that two years ago he had, in August, cut all the fronds from a very large patch of *Dicksonia punctilobula;* the next season at the same time he visited the place and found very few ferns.

Rev A. B. Muzzey alluded to the *Camptosorus rhizophyllus* or Walking fern, of which he had been able to get but few specimens in this vicinity, though he found it plentiful in Lenox, Mass., but he knew a gentleman who found a single specimen in eastern Massachusetts. He had experienced a difficulty in cultivating ferns in a Wardian case; some say it must be kept close, while others advise opening and giving air occasionally. Different species no doubt require different treatment, and if we put half a dozen species into the same case we shall find it difficult to produce the conditions best adapted to all.

Mr. Davenport said that most ferns mature their buds for the succeeding year's growth along a creeping rhizome under ground, or in the sheathing base of the stipe, during the growing season, and if the plants were cut down or gathered before this work was accomplished, the roots would become weakened and gradually die out. This might account for the disappearance of the *Dicksonia* alluded to by Mr. Halliday.

In regard to the Walking fern having been found in eastern Massachusetts, as mentioned by Mr. Muzzey, he thought it quite likely to have been introduced, as he had never heard of its growing naturally in this State, except in the western part, where it

grew sparingly. This, and many other rare ferns and plants from other States, had been set out in eastern Massachusetts by himself and others, and the future botanist of some localities may be puzzled to distinguish between them and indigenous plants.

Mr. Robinson said that the *Camptosorus* grew naturally in limestone regions, and would not be found far away from that formation, which extends from Vermont through the Appalachian Mountains to Alabama.

J. W. Hubbard had had two short experiences with ferns—in his boyhood and in the last two years. He had mowed in the pastures in New Hampshire, on rainy days, what was then called "Polypody," and it seemed to grow all the more vigorously for being cut. He had been drawn to his later observations of ferns by seeing them exhibited here, and had found it a much pleasanter experience. No branch of botany is so bewildering to a beginner, on account of the multiplicity of names. He had felt seriously the want of some book comprising all the American ferns, and had interested himself in getting some one to write such a work. He suggested that the Society should give its influence to induce some competent person to prepare a work on ferns, their mode of growth, etc.

John B. Moore said that some ferns were great nuisances to farmers, —the common brake (*Osmunda cinnamomea*) for instance—you cannot kill them by mowing, it is almost impossible to plow them up, and if dug up the roots will not decay for twenty-five years. He liked ferns by roadsides, but not in mowing.

Mr. Rand said that the law against cutting the *Lygodium* allowed it to be gathered before the spores are ripe. It has been said here that the *Gymnogrammes* were impatient of water, and do well in the house. It is true that water is death to the fronds, but they revel in a moist atmosphere, and he had been unsuccessful in cultivating them as house plants.

Benjamin P. Ware said that Col. Daniel Needham, who has a large quantity of land in Groton, where the climbing fern (*Lygodium*) grows abundantly, found people were making from twenty to thirty dollars a day gathering it.

Mr. Hovey thought there was no more danger of exterminating the *Lygodium* than the cranberry, the vines of which are gathered by millions for planting.

Mr. Rand spoke of the quantity in which ferns grow when they

find a congenial soil. The *Adiantum pedatum*, for instance, is rare here, but in the Adirondacks he had seen patches of from fifty to a hundred acres in the maple woods.

Mr. Hubbard had found many ferns which are rare here, such as *Phegopteris Dryopteris*, *Cystopteris bulbifera*, *Aspidium aculeatum* var. *Braunii*, *Struthiopteris Germanica*, *Adiantum pedatum*, and the *Botrychiums*, especially *B. Virginicum*, plentiful in Vermont. Mr. Davenport's plan of planting was very beautiful in theory, but, as soon as known, these gardens would be despoiled.

James Cruickshanks had seen a mountain in Vermont where you might get wagon loads of *Adiantum pedatum*, with stems eighteen inches high, and heads the same distance across. Referring to Dr. Hooker's collection of ferns, which had been mentioned by Mr. Robinson, he said that Dr. Hooker was educated to love them early in life, his father having been devoted to this class of plants.

Mr. Strong said that a very large patch of *Adiantum pedatum* did exist in Waltham, but had been nearly exterminated.

Mr. Buswell wished to ask Mr. Moore whether he found all ferns as difficult to exterminate as the brakes. He advised Mr. Moore to turn pigs into the fields overgrown with brakes, as they were very fond of the young fronds, which contain a great deal of mucilage. He had known fields cleared of them in this way.

Mr. Moore replied that he was fond of ferns and cultivated them in his greenhouse, but, as to some of the native ferns, a pig might as well undertake to run his nose into Bunker Hill monument as to dig up such tough roots and eat them. Though he had not tried to exterminate ferns by turning in pigs himself, his neighbors had. He knew the locality of the climbing fern in Concord, and you can still gather them by the bushel. Some of those who gather the roots will succeed in growing it. Mr. Moore himself has it growing.

Mr. Strong thought it might be worthy of consideration whether it is best to have a law here for the protection of climbing fern, though he believed that when the growth is of value to the owners of land they would find the present laws sufficient for protection if enforced.

Mr. Moore had understood that the law in Connecticut was for the preservation of the crop, which was valuable to the owners of

the land on which it grew, and not for preventing the extermination of the species.

The chairman of the Committee on Discussion announced for next Saturday a paper by John B. Moore on the importance of originating new American varieties of fruit, with a history of one or two popular varieties.

MEETING FOR DISCUSSION.

SATURDAY, February 13, 1875.

The discussion was opened by reading the following paper:

NATIVE SEEDLING FRUITS.

BY JOHN B. MOORE.

Mr. President and Ladies and Gentlemen:

I propose to read to you a few of the reasons why we should give more attention to raising seedling fruits adapted to our climate in every respect, and also to describe the place of origin, history and habits of two of the most noted Massachusetts seedling apples. It is an extensive subject, and I shall not attempt to discuss it in all its bearings, as the time allowed for opening a discussion would be insufficient, and also for the reason that we have many practical and experienced members, conversant with this subject in all its details, who should, and I trust will, take part in the discussion. I will first give an account of the origin and introduction of the Hubbardston Nonsuch, and Hunt Russet apples.

In the summer of the year 1871, I was spending a few days in the town of Hubbardston, Massachusetts, and being interested in fruit, I had a desire to ascertain the history of the Hubbardston Nonsuch apple. For information I was referred to Mr. Bennett, who for many years had been town clerk of that town, as knowing probably more about it than any other person. Mr. Bennett informed me that the original tree was still alive, growing on land owned by Mr. Joseph H. Harris, on that part of his farm called the Gleason farm, and situated about four miles west of the vil-

lage of Hubbardston. I then went with a friend to the Gleason farm, which has no buildings, they having been burnt sixty-five years ago, and the farm being now occupied as a pasture. Near where the buildings formerly stood is an orchard of about half an acre, composed entirely of trees bearing wild or natural fruit. Near the centre of this group of trees stands the original Hubbardston Nonsuch, now an old tree, the trunk of which is about fifteen or sixteen inches in diameter and hollow, the top broken off at about eight feet above the ground. Vigorous branches had started from the sides of the trunk near the place where the top was broken, and had formed a small sized head, which, as I have since been informed, produced that year two barrels of good apples. I examined the tree carefully to find whether there was any evidence of its having been engrafted, and was satisfied that it had not been. Mr. Bennett, at my request, ascertained that Barzillai Gleason built a house and barn and started this farm about the year 1780, and probably about the same time planted the seed for this old orchard, which would make the trees nearly one hundred years old. These trees are not in rows, but stand at irregular distances, as many old orchards were formerly planted. The orchard, and in fact the whole farm, occupies a westerly slope, about half way from the top of the hills, which are large, to the valleys, and has a soil of gravelly loam, quite rocky, cold, and rather wet, and is what would be called good grazing land.

This apple was first brought to notice by a Mr. Murdock, of Newton, Mass., who had friends living on the next farm. Returning from a visit to Hubbardston, he carried with him a few of these apples; some of them he gave to Mr. Samuel Hyde, of Newton, who was engaged in the nursery business, and who was so much pleased with the fruit that he procured scions, and propagated and disseminated it. This was about the year 1828 or 1830. Previous to this time a man by the name of Dana Parker, of Hubbardston, had called it the Nonsuch; Mr. Hyde, to distinguish it from other apples of that name, called it the Hubbardston Nonsuch. This Mr. Dana Parker claimed to have originated the variety by engrafting a sour apple tree with scions from a sweet one, and some credulous persons believed it; but there stands the old tree, a living witness to the falsity of any such pretensions.

The Hunt Russet apple was cultivated about Concord, Mass., more than any other apple, until the introduction of the Baldwin.

It is now more sought for than that apple, for consumers have found out its good character, it being much better in quality as a cooking apple, better for the table, and better for keeping than the Baldwin.

From all the traditions, which seem to be well founded, this apple originated on the old Hunt farm, in Concord, Mass. This farm is located one mile north of the village, on the south side of "Punkatasset" hill, overlooking the old North Bridge of Revolutionary fame; the soil a warm gravelly loam, somewhat rocky. The late Mr. Humphrey Hunt, who had given much attention to apples, and lived on a farm about one mile from the old place, had a row of trees of this variety near his house, some of which are still remaining. He informed me that these trees were large old trees when he was a boy, and were planted by his great-grandfather. It is now one hundred and five years since he was born, and if they were old trees when he was a boy, they are at least two hundred years old now, and this variety has undoubtedly been growing in Concord more than two hundred years. I inquired of Mr. Hunt where this apple originated; he said on the old Hunt farm on Punkatasset hill.

I have described these old trees more minutely for the purpose of showing the great longevity of the variety, and that means hardiness, for no puny, feeble variety lives to any such age. In the year 1832, when nearly all the young Baldwin trees were winter killed, this variety escaped entirely unharmed, and the same result happened two years ago. These facts prove its great hardiness and ability to withstand changes of temperature. Another fact should also be remembered, that although it will grow almost any where, it will not fruit well in a cold and wet soil, unlike the Hubbardston, which is also quite hardy, and will produce good crops on soils too cold and wet for either the Hunt Russet or Baldwin, and on dry and warm soils also. In fact the Hubbardston is productive on almost any soil or location where any apple tree will grow.

My observation leads me to believe that apple trees originating on a cold and wet soil will do well on a soil similar to that on which they originated, and on warmer soils also, but that those originating and showing their perfection on warmer soils are not adapted to cold ones. There may be exceptions to this rule, but I think it will be found generally correct.

The above inquiries about the apple have led me to consider the adaptation of fruits to our soil and climate. It certainly does look as though we must depend upon ourselves—that we must originate here on our own soil, varieties suitable to our climate, and which shall be in all respects preferable to our old varieties, combining hardiness, good quality, productiveness, and beauty, with which to fill the gaps in our present lists.

Only a few years ago, and long after this society was founded, we depended almost entirely for our pears upon varieties originated in Europe. The older members of the society, with a commendable desire to increase the number of good pears, and at a considerable expense, imported varieties by hundreds, tested them, and were obliged to reject a large portion of them either for their poor quality or some other fault. The only American pear then in common cultivation, which in quality would now be called strictly first-rate, was the Seckel. Now, how is it? In the prize lists of this society, for the present year, you will find special prizes offered for eight American, and for seventeen European varieties, and were I to be restricted to fifteen out of the whole twenty-five, the eight American varieties would be among the fifteen. Now I do not wish to be understood as objecting to the importation of new fruits, or to the European varieties. I know well that the interest in raising new seedlings, and even the seed from which some of them were grown, came from these importations, but I wish to show that native varieties are fast gaining in public favor, and in the end must displace many of the old varieties, because they are better suited to our climate and soil.

In a collection of five varieties of apples for general cultivation, only one variety not native, the Gravenstein, would be selected, and this for its good quality and beauty, for it is not remarkably productive. The same remark applies to strawberries, the English varieties, though large and handsome, being a failure here ; and the French and Belgian varieties, if we except the Triomphe de Gand and Jucunda, which are not destined to become great market varieties, are no better.

Foreign varieties of grapes have long since proved a failure for out-door culture. Constant attempts are being made to hybridize the native with the foreign varieties, with the object of attaining the fine quality of the foreign and acquiring hardiness sufficient to withstand our climate. Many varieties have been produced from this

hybridized seed, almost all, I was going to say all, of them showing the faults of the foreign,— lateness, tendency to mildew, and inability to withstand our winters without protection. Some of these experiments are, perhaps, worth trying, and I trust may prove successful.

The prominent features in the foreign varieties of grapes are fine quality, large bunches, inability to withstand the cold of our winters without protection, leaf exceedingly subject to mildew, wood soft and spongy, and lateness of ripening. Now among these points the only ones desirable to perpetuate are fine quality and large bunches; the others are defects. The points of the native varieties are earliness of ripening, hardiness, and poor quality generally, in some a tendency to drop from the bunch, and a general adaptation to our climate. Of these all that it is desirable to retain are hardiness, earliness, and adaptation to our climate. Now if we could extract the good qualities from each parent without also taking the poor, it would be one thing, but actual experiments prove that it is almost impossible. Constitutional defects are very likely to be perpetuated in the offspring of either plants or animals, more likely, I often think, than desirable qualities. Now the grape is unlike any other variety of fruit in these respects, for in the other fruits we grow seedlings from the same species; not as in the hybrid grape from two distinct species,— which some botanists or horticulturists at one time doubted the possibility of crossing together, although others have claimed that they are the same species,— and therefore in the other fruits we can avoid these serious defects by not using those with weak habits for parents. I know how fascinated one becomes over some of the new hybrid grapes; we plant them in our gardens, they are strong, vigorous growers, and will withstand trouble better when young than afterwards. In three years we have a few bunches of ripe grapes, every thing looks lovely, we have petted them, laid them down and covered in the winter; then we have a year like 1873, in which there is considerable mildew, and grapes are rather poor, followed by a season like 1874,— grapes do not ripen, vines are badly mildewed, the wood is mostly killed, and the vines are so much injured that with good seasons afterwards it will be difficult for them to recover, and these grapes are called *hardy*. What does hardiness mean in Massachusetts? Does it not mean the ability in any tree or plant to stand up,— not taken down and

covered,—I say to stand up in an open situation, exposed to a temperature of fifteen degrees below zero, accompanied by a sharp wind, without injury? It must mean that, if it means any thing, for that state of things will exist every few years. Some may say that they are fine and we can afford to lay them down and cover up; that we can afford to dust them with sulphur and pet them generally. To such I would say, do a better thing and have a still better grape, build a cheap cold grapery and have something that you can rely upon, and that will prove to be more satisfactory.

But were I raising seedlings, hardiness sufficient to withstand our climate would be the first requisite, and breeding from a variety defective in that respect would seem to be a mistake that should be avoided. Some varieties of the strawberry, grape, and other fruits are very fixed in their character, and seedlings from any of them would be either very much like the parents, or exact reproductions of them. I have found this particularly so with some strawberries, but if a variety has once broken its habits, or, in other words, "sported," there is no limit to what it may do afterwards, and from such varieties we should expect improvements.

Need I say that the soil, climate, and skill that have produced the Baldwin, Rhode Island Greening, Porter, Williams, Roxbury Russet, Hunt Russet, Foundling, Garden Royal, Hubbardston Nonsuch, Mother, and other apples; Clapp's Favorite, Dana's Hovey, Seckel, Howell, Sheldon, Tyson, Lawrence, Onondaga, Merriam, and other pears; Hovey's Seedling, Wilson's Albany, President Wilder, and numerous other varieties of strawberries; Crawford's Early and Late, Cooledge's Favorite, Hale's Early, and many other fine peaches; the Concord and other varieties of grapes,—can, if properly directed, produce any number of new seedling fruits of fine quality adapted to our climate. An intelligent method of procedure, combined with determined and persistent efforts, will in the end accomplish the object desired.

You may ask, What is an intelligent method? That will be more difficult to answer, and I approach it with much diffidence in the presence of some of our older presidents, men who have made their mark in this direction.

The old maxim in breeding animals, that like produces like, is just as true in breeding fruits, therefore select for the parents varieties having, in a marked degree, the points you wish to perpetuate. Suppose one of these points is quality; if a variety has

a weak habit of growth, any tendency to disease in any form, or a want of hardiness, reject it, for if you breed from such a parent, the chances are stronger of perpetuating its bad than its good points, and the perpetuating of simply quality, with a weak habit or want of hardiness, is no gain whatever. We must have hardiness and vigor, or all the other good qualities will be rendered useless. The sooner we try to adapt the variety of fruit to the locality, not the locality to the variety, as we have been constantly trying to do, the quicker we shall succeed. It is too much to expect one variety of fruit to succeed everywhere, or even to succeed on the different soils here, and it is rarely that we find one of that description. Collins and Bakewell raised, yes founded, those splendid herds of Short Horn cattle and flocks of sheep by adopting the rule that like produces like, and by adapting the cattle or sheep to their locality. Those cattle deteriorate when fed on our pastures, but succeed on the rich pastures in the West, because they are adapted to such pastures and localities. I am aware that these views will not be accepted by all here, but the object of this paper is to suggest ideas for discussion, and if I have advanced wrong or untenable views, I shall be glad to be set right. I look for most of the improvement in fruits here to the influence of the Massachusetts Horticultural Society. The public do not know it, but I am well satisfied that if this society had not existed, there would not have been any of Dana's or Clapp's seedling pears, or Hovey's or Wilder's seedling strawberries, for the exhibitions of new fruits and the interest in them created by this society caused indirectly, if not directly, the efforts of these men in this direction, which have been crowned with such success.

Marshall P. Wilder said that he had been very much pleased with Mr. Moore's paper. It is such essays as this, which go to the bottom of the subject, that elevate horticulture to a science. If each member of the society had raised only one variety like the Hubbardston Nonsuch, the country would have been flooded with fine fruits. He supposed that Mr. Moore would give us an illustration of his method of producing seedling strawberries. Mr. Wilder here exhibited two seedling plants raised by him last summer. Instead of growing the plants in the greenhouse, for crossing in the spring, as was formerly his practice, he has taken up stools of pistillate plants in flower, from the open ground, picking out the weak blossoms, and then carrying staminate flowers to the green-

house and fertilizing. He sowed the seeds immediately on their ripening.

Charles M. Hovey questioned the correctness of the date (1832) given by Mr. Moore, of the destruction of Baldwin apple and other trees. He was under the impression that it was in 1835.

Robert Manning said that the notices in the "New England Farmer" all through the spring of 1832, by Mr. Lowell and others, of the great injury to fruit trees the previous winter, establish the correctness of the date given by Mr. Moore.

Mr. Hovey had been pleased with Mr. Moore's paper, and especially with the requisites which he had laid down for new fruits—vigor, strength of constitution, and hardiness. The point as to hardiness, particularly, was well put. Why should half hardy rhododendrons and similar plants, which require covering, be called hardy? To be classed as hardy, plants should be able to stand in the average of years; it would not be just to deny the hardiness of plants because they were killed in an exceptionally cold winter, as grapes, etc., were here in 1857, and hollies, rhododendrons, and laurestinus in England in 1861. So with strawberries — those which require covering cannot be strictly termed hardy. He did not wholly believe in the view that a fruit must be a native of a given locality to be adapted to cultivation there. The Seckel and Bartlett pears, and the Red Astrachan, Gravenstein, Baldwin, and Rhode Island Greening apples do well everywhere. To be worthy of being added to the list a fruit should be an improvement over all others in some points, and should not require peculiarities of culture or location. The Lawrence pear, though possessing many valuable characteristics, is not adapted to market, from the delicacy of its skin, and some strawberries, it is well known, though of fine quality, cannot possibly be carried to market, from their extreme softness. We must raise a vast number of seedlings to select from them such as shall be truly valuable.

President Parkman inquired whether, in raising seedlings, seed should be selected not only from fruit of fine quality, but from fine specimens.

Mr. Hovey believed that the cause of the inferior quality of seedling fruits might be in the selection of seed from the largest and most watery specimens. He thought this probably the case with some of Mr. Clapp's seedling pears, and accounted in the

same way for the tendency of some of them to rot at the core. He would select seed from medium sized, solid specimens of pears, and the same with strawberries. Among flowers, the semi-double camellias, fertilized with very double kinds, produce flowers so hard that they will not open, but single flowers fertilized with the pollen of double kinds produce flowers sufficiently double.

Mr. Wilder said that there was some truth in Mr. Hovey's remarks. Some of Mr. Clapp's seedling pears were raised from the Flemish Beauty, which has a tendency to rot at the core. He would suggest whether this tendency may not be caused by sowing the seeds of high bred varieties, but the subject is little understood, and it should be noted that others of Mr. Clapp's seedlings, presenting evidence of the highest refinement, are remarkable for their keeping qualities. All agree on the desirability of hardiness and vigorous constitution; but we must have excellence of eating quality in fruits, and two great points are fine form and pleasing color. From the time of Henry VIII. a red apple has sold better than a yellow one.

President Parkman said that there were two methods of producing new varieties: first, hybridizing,— attempting, as Mr. Moore has said, to combine the best qualities of two varieties, but often succeeding in combining only the worst. The other method may be called, in the language of the day, evolution or development. The question is whether we may expect this latter method to produce from our wild grapes varieties equalling or approaching the foreign in quality.

Mr. Moore expressed the belief that whoever lives thirty years will see such grapes, if the progress of the last thirty years continues. He has five hundred seedlings planted to fruit, and never covers one, but keeps them on the trellis all winter. If one is to be killed, the sooner the better. When the Concord winter kills it is because the wood is not ripe; people manure heavily to produce large fruit, and produce unripe wood. The wood of the Isabella is soft, unlike that of the Concord. When he wants to raise seedling strawberries he puts some pistillates away from any other plants, except the staminate which he desires to fertilize them. Ordinarily there is one strawberry on a vine better than the others, and he selects that one for seed.

Henry F. French asked, What makes buds winter kill? Downing had a theory that when the temperature fell to a few degrees

below zero, all the buds were winter killed. He had examined the point, and satisfied himself and Mr. Downing that the theory was incorrect. Why is it that buds are killed with the temperature at a certain point some years and not others? Mr. Moore has partly explained it. What is the effect of cold,—does it rupture the sap-vessels? It would appear that it does, from the fact that sometimes when trees have been winter killed the sap will collect so as to spirt out on pressure. Undoubtedly trees freeze through, as those who have chopped wood know, but what the particular injurious effect is, and why it is produced some times and not others he did not know.

If we cannot get a grape that will stand on the trellis through the winter, shall we give up the attempt to cultivate grapes? Grape vines in houses require to be covered, and it is no more work to cover them out doors than in the house. Even in those countries which are generally considered best adapted to the grape the vines are sometimes covered. In Turin, Mr. French said, grape vines are taken down and covered just as they are here. He keeps his Concords up, but has taken down and covered Delaware, Iona, and Rogers' Hybrids. He did not think the trouble of covering too great a tax, but if we can get varieties of equal excellence that do not need covering, so much the better. In mild climates both plants and animals feel the cold.

Mr. Manning was asked to state Dr. Van Mons' theory in regard to raising seedling fruits, and replied that though Dr. Van Mons did undoubtedly have a very elaborate theory, according to which the best results were to be expected by commencing with wild fruits, and ameliorating them through several successive generations, after which only the finest fruits would be produced, his researches into the results effected by Van Mons in accordance with this theory had been extremely unsatisfactory, owing to the fact that, like all other lovers of good fruit, he was a collector as well as an originator, and it was impossible to distinguish between the varieties raised by him and those raised by others. Moreover, fruits sent out by him as his own seedlings bore evidence of parentage from some of the old varieties, instead of the distinct character which we should expect from seedlings raised in accordance with his theory. The Queen of the Low Countries, for instance, which Van Mons claimed as a seedling of his own, and extolled as being "without doubt the most perfect of pears," is

little more than a reproduction of the old Spanish Bon Chretien, described by Quintinye nearly two hundred years ago.

Mr. Hovey said that Mr. Manning's remarks expressed precisely his opinion,— not that Van Mons had not done so much for horticulture as had been supposed, but owing to the facts stated it was exceedingly difficult to say precisely what he had done. Thus the Beurre Spence, which he described as one of his seedlings, and to which he gave the highest praise, proved, after numberless erroneous kinds had been received for it, to be nothing else than the Flemish Beauty, which was not originated by Van Mons. This variety now bears evidence of decay, as do the Glout Morceau and St. Michael, but it makes a good stock to graft other varieties upon. There was one other native pear, the Andrews, which had not been mentioned, though nearly as well known as the Seckel. Though different accounts are given as to its origin, all agree that it is a native.

Mr. Wilder said that Van Mons was undoubtedly mistaken as to the origin of some of the fruits which he disseminated. There are many of them which bear evidence of culture, and could not have come immediately from wild sorts. Neither could he prevent his trees planted closely together from fertilizing each other.

E. W. Wood alluded to the alternate bearing of some varieties of apples, and spoke of an orchard in Marshfield which produced between three and four hundred bushels in 1873. A committee of the Newton Horticultural Society, of which James F. C. Hyde was chairman, was appointed to inquire into the cause of this productiveness when other orchards failed to bear, and although the owner evaded the question, it was ascertained that he had been particular to remove all the blossoms in the even year, and that this course had not succeeded equally well with all varieties. Mr. Wood also spoke of the Sweet and Sour apple, of which there was a tree in his grandfather's orchard more than seventy-five years ago, that sometimes bore from thirty to forty bushels in alternate years. The tree has been grafted from largely. It produced on the same limb apples entirely sour, entirely sweet, and partly sweet and partly sour, the sour predominating. The sweet apples were smaller and yellower than the sour, and these characteristics were retained by the respective portions in those which were both sweet and sour, there being a ridge around the fruit

where the two kinds joined. In growth the tree resembles the Rhode Island Greening. The common account of the origin of this variety is that two buds were divided and caused to unite

Mr. French said that such a tree grew in his father's orchard.

Mr. Hovey had never seen specimens of such a fruit.

Mr. Wilder's confidence in the existence of such a fruit had never been sufficient.

Mr. Hovey said that many mistakes occur in gathering fruit, but there was no reason why fruits should not vary like flowers—like some camellias before him, for instance.

Mr. Wood did not know that the peculiarity could be transmitted, in all its strength, by grafting but the existence of such an apple was a fact well known in Worcester county.

Benjamin G. Smith was prepared to bear testimony to the existence of the Sweet and Sour apple. He knew of a tree in Sudbury which produced fruit with one half sweet and the other half acid.

James Cruickshanks said that he saw a very handsome dish at the exhibition in Worcester.

Mr. Manning said that he tasted some specimens brought here by Mr. Wood last fall, and though the difference was less distinctly marked than he expected to find it, there were one or two specimens in which it was quite decided.

E. W. Buswell said that the more marked and striking specimens had been selected and tasted at Mr. Wood's store, before the collection was brought to the hall.

MEETING FOR DISCUSSION.

Saturday, February 20, 1875.

The discussion was opened by the following paper: —

Parlor Plants. I.

BY EDWARD S. RAND, JR.

The general love of flowers manifests itself most noticeably in the culture of window plants. Alike in the parlors of the rich and the garrets of the poor we see the love of these bright gifts

of nature,—often, indeed, in the latter case the only indication of an appreciation of the beautiful. The window plants are cared for and tended, they share with the children of the family the mother's solicitude, but often from their general appearance one would judge that the care bestowed was ill requited. Yet the fault is not in the plants; they will well repay all care, but that care must be directed by intelligence.

A plant is an organized being; it lives, breathes, eats, drinks, and digests; its term of life varies from a few summer days to hundreds of years; its wants are few, its food simple, and essentially the same in all the myriads of species, from the pole to the equator.

An important point to bear in mind is that these wants,—these needs of the plant,—few though they be, are imperative and unvarying. A man may neglect to take food, or he may over feed, and perchance escape ill effects, but the more delicate organism of the plant refuses over indulgence, and is sure to suffer from privation.

We are thus led to the statement that the reason of the general ill success of parlor culture of flowers is too great or too little care. In the first place, a plant is killed by kindness—by provision for fancied needs; in the other by neglect to supply the essentials of healthy life.

A third cause also is a choice of unsuitable species of plants, for the healthful existence of which we can not in parlor culture supply the requisites. Let us now briefly consider the life of a plant as shown by the wants which are essential to that life.

We have said a plant lives and breathes, and a want of provision for this breathing is, we hold, one great cause of ill success in parlor culture. A plant breathes through myriads of pores existing more or less numerously in the foliage according to the species. If these pores become in any degree clogged by the fine dust of the room, just so much is the health of the plant affected by the stoppage of one of the vital functions. The dry air of living rooms, often contaminated by furnace gas or unconsumed illuminating gas, is another source of ill health.

Plants must breathe a moist pure atmosphere,—although what is a pure atmosphere for a plant is not so for animal life, as plants exhale oxygen and inhale carbonic acid, while exactly the converse is true of animals,—and an atmosphere charged with coal gases is sure to produce disease.

The food of a plant is derived partly (sometimes wholly) from the air, in the form of moisture, and partly from the earth in the form of soluble salts; this food it elaborates by its own peculiar organism and appropriates to its growth, and just in the proportion that this food is furnished in suitable form and quantity for such adaptation, will be the healthy growth of the plant. Plants, too, have their seasons for feeding, and the supply of nutriment must not only be sufficient in quality and quantity, but furnished at the proper time.

Light, generally direct sunlight, is important to the health of plants; comparatively few thrive in shade, and with most the more light the stronger and more vigorous the growth. Plants grow to the light, and withdrawn from it they strive to reach it, and become what the gardeners call "drawn," that is, produce long, weak growth, with leaves at long intervals, instead of the short, stocky growth, which is in most plants a sign of health.

We thus have the essentials of health in the requisites of air, cleanliness, and light. These properly provided, with judicious waterings and suitable soil, success is certain. Let us, however, consider these essentials somewhat in detail.

Air. — We have said a vitiated atmosphere is unsuitable for the healthy growth of plants, and such is the air of most parlors and living rooms. Its life is dried out of it by its passing over the red hot iron of our furnaces and stoves. We can all remember instances where plants do well in rooms heated by open wood fires, the most healthy mode of heating a room, both for plants and human beings. Steam heat is better than that of furnaces or stoves, as the air is less contaminated, and can be kept moister. But it is not alone the dryness of the air that is injurious. From all furnaces or stoves more or less gases escape and contaminate the air, and where gas is used for illumination, a large percentage escapes unconsumed into the air of the room. Now, how can we remedy this? If possible, by growing our plants in rooms which are not lighted by gas or heated by furnaces or stoves. Where this is impossible, by securing by ventilation a complete change of the air of the room at least twice a day. Plants, especially those suited for parlor culture, seldom require a very high temperature, and most of our living rooms are too hot for them; a night temperature of 40°, rising to 65 or 70° by day, is quite sufficient for the healthy growth of most plants, and this rise of temperature should be mostly from sun heat.

Sudden changes of temperature, and cold drafts, should be avoided: to some plants a chill is almost as injurious as frost. During the present winter we have grown palms (*Latania*), agaves, *Cypripedium insigne*, *Tillandsias*, four species of ferns, Chinese primroses, and pelargoniums in a large entry where every cold night the mercury was as low as 42°, and more healthy plants one could not wish. A good plan is to separate a bow window from the room by a glass partition, making in fact a small conservatory, and thus pure air, moisture, and light can be secured. Evaporation of water on stoves or furnaces is of great benefit, and should be universally adopted; in fact the moister we can keep the air of the room, consistently with the health and comfort of the inmates, the better it will be for the plants; but let us remember that in a low temperature the moisture may be less than where the room is kept very warm.

Cleanliness is of the first importance. A dirty plant will not thrive. The fine dust always floating in the air of living rooms settles upon the plants. This is easily removed by sponging with lukewarm water, or by removing the plant to a sink and copiously showering it from the fine rose of a water-pot. The stem also of hard wooded plants should be occasionally sponged.

The frequency of showering or washing must be regulated by the necessities of the case or the nature of the plant. Some plants are impatient of water upon the foliage. In many cases dust may be removed by gentle brushing with a soft feather duster.

Under this head we may properly speak of the insects infesting house plants. These are few, and very little attention will keep plants clean.

Green fly, or aphis, which is the most common pest, is best destroyed by smoking. Place the infested plant under a barrel, put a few live coals in a dish, moisten some common plug tobacco that it may not blaze, throw it upon the coals, and let the plant remain in the fumes from five to ten minutes; then give the plant a good syringing or sprinkling, and the work is done.

Thrip seldom attacks house plants; should they be found, smoking will remove them. Red spider is kept down by moisture,—frequent washing and sprinkling will destroy it.

Mealy bug is one of the worst pests of the greenhouse, but is rare on parlor plants. Washing will remove it, but the best plan is to touch the places where it is seen with a camel's hair pencil dipped in diluted alcohol.

Scale of several kinds is often found on the stems and leaves of parlor plants; washing with strong soapsuds and persistent application will remove it. A paragraph has been going the rounds of the papers recommending kerosene oil for scale on ivy; that it will destroy scale there is no doubt, but it will also kill the foliage. It might, however, be used cautiously if diluted with water, with which it will mix if a little soap is added.

A healthy plant is much less likely to be infested with insects, and if plants are kept in stout, vigorous growth there will be little trouble from any insect pest. A warm dry atmosphere is much more conducive to their development than a low moist temperature. Generally, however, house plants have no insects which very little care when they first appear will not remove.

Light is very important to plants, and for most plants direct sunlight is necessary. A southerly window is the best exposure, but a deep bow window fronting the south, where the morning sun can come in on the east, and the light of the setting sun on the west, is the best for the growth of plants. If the choice is between an easterly or a westerly window, the easterly should have the preference, as the morning sun is better than the afternoon. The plants should be as close to the light as possible, as thereby there is less danger of their becoming drawn; they should be frequently turned, that all sides may have equal exposure; this is especially necessary with quick growing, soft wooded plants. Some of the revolving flower-stands are in this respect very useful, as they enable the plants to be turned to the light without the labor of lifting the pots. Light has also great influence upon the colors of flowers, which if grown away from the sun are usually pale and weak.

Water. — We have said that plants derive most of their food from the soluble salts of the soil which are taken up by the roots in a liquid form and assimilated to the uses of the plant. Sufficient and careful watering is most essential to successful culture, and it is from neglect in this particular that so many failures arise. The quantity of water needed varies with the nature of the plant; a very little suffices for some, others require a large supply. There are, however, very few plants that will flourish with water standing around the roots. Therefore, in potting, provision should be made by ample drainage for the escape of all superfluous water, and where saucers are used all water which drains off should be

emptied. Watering may be more or less frequent according to the nature of the plant, but should always be thorough; not little driblets, given now and then, moistening the surface soil, and leaving the centre of the ball dust dry, but a good soaking, thoroughly wetting all the soil until the water runs off; then do not water again until the plant is dry. The temperature of the water should never be below that of the air of the room; it may be higher, and the water may even be lukewarm; but the many paragraphs found in newspapers advising the use of hot water are no less pernicious than absurd. In a future paper treating of the best plants for parlor culture, we propose to prescribe more fully as to watering. The best mode of enriching the soil is in the water; guano, the salts of ammonia, and other manures may be applied in a soluble form; caution is necessary, however, lest the manure be too strong, thereby injuring the plant; and usually, if the soil is good, no manure will be required. If a plant exhausts the soil, the best remedy is repotting.

Soil.— The soil in which the plant is grown is an important element of culture. For most house plants a rich light soil is suitable, such as may be easily made by a slight mixture of fine fresh sand with good garden loam. In this, if good drainage is secured, most plants will do well. Where, however, it can be obtained, a mixture of two parts well rotted turf and one part sharp sand is preferable.

If there is a neighboring greenhouse it is easy to obtain such soil, but any sweet earth which is not close, or by becoming so, allowed to get sour, will grow common plants well. The soil specially suited for particular plants will be prescribed when treating of those plants. It is a good plan to stir the surface of the soil in the pots whenever it becomes hard; this is especially beneficial to roses. The addition of a few bits of charcoal to the soil often increases the brilliancy of the flowers, and to some plants powdered bone imparts a more vigorous growth.

To conclude: while plants may live and often bloom with little care, and often in spite of neglect, they will repay well directed care by vigor of growth and profusion of bloom. While their wants are but few, attention to these is essential to their health; and in the parlor culture of plants, if they are worth growing at all, they are well worth the care which is necessary for successful culture.

In a future paper we propose to treat of the plants most suitable for house culture.

Charles M. Hovey criticised Mr. Rand's recommendation of "good garden loam." This is a very general term, and unless a person has removed to the country and formed a new place, the soil of his garden is hardly fit for the general culture of pot plants. He would say, good maiden loam, such as the top spit of a pasture. Garden loam might answer for some things which are easily cultivated. Another point, noticed by Mr. Rand as very important, especially for roses, is stirring the surface soil. Mr. Hovey agreed with him, and had found it in five cases out of ten fully as beneficial as repotting.

Mr. Rand thought Mr. Hovey's criticism on the expression "garden loam" quite correct. He did not mean such loam as is commonly dug out of gardens, but native loam.

Marshall P. Wilder had been highly pleased with Mr. Rand's article, and thought it would be productive of much good. He desired to enforce the necessity of fresh, pure air, especially for hard wooded plants which had been dried by heat and gas. He grew plants at No. 4 Montgomery place, opposite the hall, from 1827 to 1832, and among them were camellias, which he procured from Mr. Haggerston, of the Charlestown Vineyard, and which formed the foundation of his present collection of several hundred plants. He found it very important, especially for the camellias and plants of similar character, to give them air on a mild day, such as we sometimes have in March. By this management, and keeping them dormant in a northern room until it was time for them to bloom, he was very successful. Plants are tantalized by too much heat.

Watering with liquid manure is a great improvement, but much care should be taken to use it very weak. Mr. Mechi, who has used it so extensively on his farm crops in England, prefers it almost colorless. M. Van Houtte has given very full directions for preparing and using it; he makes it from cow manure, and has it almost transparent. There is nothing so much neglected in pot cultivation as thorough drainage.

E. W. Buswell inquired whether charcoal did not prevent the tendency to souring of the soil, which had been mentioned. His practice had been to mix charcoal dust with the soil in pots which

were to remain for some length of time, and he had considered it beneficial in keeping the soil sweet. Mr. Wilder answered that it was; if the water in your cistern is offensive, put in a bag of charcoal and it will soon become sweet.

Mr. Rand, in answer to a question from Henry F. French, as to the preparation of loam for pot plants, said that the best way is to take the turfs from a pasture in the spring and stack them, and in autumn a large part will be rotted, but they will be better the next spring. Mixed with a little sharp sand, this will grow nine plants out of ten.

J. H. Woodford said that he had a rotary stand of plants in a bay window, with an oil-cloth under it, and by turning up the edges and placing a lath underneath he was able to water them there, though the servants objected to wiping up the oil-cloth. The plants looked very finely, and the foliage was healthy, but keeping them so moist, they had green fly, and he was obliged to take them to the sink and syringe thoroughly. Plants feel the changes of the season, and to succeed they should be potted early, say in July or August. He would use very coarse soil—he would not object to lumps as large as a hen's egg, and would like to get some old dry cow dung from a pasture and break up to put in the bottom of the pots.

Mr. Hovey said that it was very important to turn plants round at least once a week; it is just as grateful to them as it is for us to change our posture after sitting in one position all day. Lumps of soil the size of a hen's egg could be used only in large pots, but sifted soil has been the means of injury to many plants. The *Vallota* is well adapted to parlor culture; he had frequently known it grown by ladies in their parlors better than by gardeners.

Mr. Rand said that the *Vallota*, unlike the *Amaryllis*, should not be dried off, but kept in continuous growth. The trouble is that gardeners attempt to dry them off like the amaryllis.

John B. Moore said, in regard to stirring the soil, that if we do this for an inch or two in depth, common sense would teach us to take away the soil and replace it with new.

Henry F. French asked what was the object of repotting, and whether there was anything analogous to root-pruning in crowding the roots into a small pot.

Mr. Rand replied that there were several reasons for repotting; the first is to furnish new and fresh soil to replace that which is

sour. In repotting some of the roots are broken off, which causes them to branch, as in root-pruning. Some plants, which naturally grow to a large size, are by crowding the roots in pots forced into bloom, and kept within such limits that they can be accommodated in the greenhouse. One object of stirring the soil is its aeration. This is a subject but little understood, but he held that plants receive much nourishment from the air through the roots.

Mr. Hovey would not recommend stirring the soil as a perfect substitute for repotting. If the soil is not stirred the water runs off in one channel, but is diffused through the whole ball when the soil is stirred. He had known camellias which had not had the centre of the ball wet for a year, or even for a longer period. English cultivators recommend driving an iron rod down through the centre of the ball to permit water to permeate. It is also important that the pots should stand level, for if they do not the water will not be equally distributed. For many plants he preferred stirring the soil to potting in a large pot.

Mr. Wilder referred to the remark of Gen. Dearborn, the first president of the society, and one of the best cultivators of his time, that water and air were the two great constituents of plant life.

William Gray, Jr., did not wholly agree with what had been said as to the use of the sieve. He always passes his manure through a sieve. He uses the soil coarse, but would have the manure fine, and mixed intimately with the soil. The essayist had said that the temperature of a room in which plants were grown should rise and fall with the sun, but it would be impossible to live in a room with an evening temperature of 42°, or to wait until the sun raised it to 65° in the morning. He had grown *Livistonas* and *Dracœnas* in a living room successfully, and had brought in azaleas from the greenhouse when in full flower, without injury. The three plants now on exhibition had been thus treated for twelve or fifteen years.

Mr. Wilder agreed with Mr. Gray in regard to the *Livistona* and *Dracœna* as doing well in the parlor, and added that Mr. Hunnewell brings the green Dracœna (*Brasiliensis*) into his parlor in the winter.

Benjamin G. Smith said that he tried window gardening for some time, but so unsuccessfully that he gave it up and built a small conservatory. He used to be very particular to have the

water of the same temperature as the air of the house; but lately had used it directly from the faucet without perceiving any ill effect. He had found great benefit in syringing two or three times a week to destroy the green fly. The floor of the conservatory is half an inch lower in the centre than at the sides, so that the water runs off and the house gets dry very quickly. He uses a small Weathered & Cherevoy's boiler, under which he burns the siftings from the house furnace.

Mr. Rand related and ridiculed a newspaper story of a lady who had a large cactus which she watered with water from the tea-kettle. The next day it had buds, and the next blossoms.

Mr. Hovey spoke of a gardener who advised him to water his cactuses with hot water, saying that he knew a lady who did so with the greatest success. A gentleman in Cincinnati who was famous for raising the finest callas, watered them with hot water. Mr. Rand would agree that orchids and hothouse plants will not bear cold water. Of what use would it be to heat the earth in a bed up to 90°, and then water with water at from 30° to 40°?

Mr. French said that he saw the teakettle taken from the table after breakfast very often, and the water from it poured upon plants quite hot, and it certainly did not kill them.

Mrs. E. M. Gill spoke of a gentleman who boasted of his callas, which he watered with hot water. She did the same, and her callas have flourished.

Robert Manning said that when making a call on our late botanical professor, John Lewis Russell, Mrs. Russell showed him a calla, which had been in an unhealthy condition, and was improved by being watered with hot water.

Mr. Woodford said that the calla was a native of Egypt, and in the Red Sea the thermometer, when plunged in the water, went *down* from 120° to 90°. The Nile runs through deserts where the sand is intensely hot; hence hot water will not hurt the calla.

Mr. Buswell said that when boiling water is poured into a pot it immediately parts with some of its heat to the soil. We know that some seeds require hot or boiling water to cause them to germinate.

Mr. Hovey said that he had turned boiling water on acacia seeds from the Cape of Good Hope. Frost appeared to have the same effect as hot water; he had some amaryllis seed left in a room with the temperature at zero, and supposed they were

spoiled, but they germinated in three weeks. Peach stones and the seeds of our native plants germinate much sooner for being exposed to frost. The effect is the same in both cases — to rupture the fibres or covering which encloses the germ.

Mr. Wilder called attention to the flowers of camellia Mrs. Abby Wilder, exhibited by him, comprising seven different specimens, from pure white to deep pink, confirming his previous remarks in relation to the sports of this variety.

Mr. Rand spoke of a very rare orchid which he had brought in, — *Pilumna* (formerly *Trichopilia*) *fragrans*. The fragrance is very powerful, and more agreeable than that of any other flower with which he is acquainted, and is a mixture of that of *Lilium auratum* and the garden narcissus. This plant has been in bloom a fortnight. It is a cool orchid, but very difficult of cultivation.

The Committee on Discussion announced for next week a paper on "Natural Sports and the Influence of the Stock on the Graft, and *vice versa*."

MEETING FOR DISCUSSION.

Saturday, February 27, 1875.

The discussion was introduced by the following essay: —

Natural Sports, and the Reciprocal Influence of Grafts and Stocks.

BY CHARLES M. HOVEY.

These are subjects of very great interest, and the latter a subject prolific of discussion, and one which can scarcely be dealt with satisfactorily in the brief compass of these essays. Though coupled together for discussion, they are yet somewhat distinct in their nature, and I shall treat them separately, first alluding to "Natural Sports."

And this leads to the question, What is a natural sport? To most horticulturists and cultivators of experience this may

appear a simple question, but by the mass of plant lovers it is not so well understood. A natural sport is a variation or peculiar change of any part of a plant from its normal state. Take for instance the camellia, or japonica, as it is so often called. Here we have the Old Double White (*alba plena*), a Chinese variety, imported into England as long ago as 1739, and since then extensively propagated and disseminated all over Europe and America. Yet it is still the very same flower it was in 1739 so far as we know ourselves, or can learn from descriptions, paintings, or books. It has never been anything else. If, however, you or I had a plant which should, upon one particular branch, show a flower of a different form or color, that particular flower would be denominated a "sport." So, too, if the leaves were to assume a different shape, or the branches some peculiar form, that would be also a sport, because, in either instance, it has departed from its original type. Such a flower or branch is, therefore, a "natural sport," and so considered in these remarks.

It is somewhat extraordinary when we notice the character and importance of these sports, that so little has been written upon the subject. In the very hasty manner in which I have been enabled to look through the works of various authors I find that it is scarcely mentioned at all. Mr. Knight, in his numerous physiological and horticultural papers, published from time to time in the "Transactions of the London Horticultural Society," does not speak of sports. Loudon, in his various exhaustive volumes on trees, plants, and shrubs, has little or nothing to say of them. Lindley, in his "Theory of Horticulture," does not notice them, and M'Intosh, Thompson, and other authors, do not give us any information upon the subject. Indeed it is only in the periodical works upon horticulture, and scattered through many volumes, that much can be learned, and this in the main recorded of only a few particular sports.

When we reflect a moment upon their importance, and consider how much our pleasure grounds and gardens, our greenhouses and conservatories have gained in *recherche* additions through these sports, we are surprised that so little has been treasured up regarding them. The fact that we know so little of the cause of these sports, is probably the reason why the record of their production is all that can be found.

It is only within a few years that they have assumed any promi-

nence, though undoubtedly they have existed for a long period. The very curious variegated trees from Japan, though probably some are from seed, are, many of them, undoubtedly sports, for it is not probable that so many seedlings should be precisely like the parent, except in the color of the leaf. Loudon, in describing one of the very dwarf forms (*Abies Clanbrasiliana*) of the Norway spruce, states that it was said to have been found at Belfast, but, he remarks, that to him "it was very doubtful whether such a stunted variety as this was ever found in a bed of seedlings; we think it more probable that it is a continuation by cuttings of one of those bird-nest-like monstrosities that are occasionally found on all trees;" in reality, a sport, though he does not use that word.

As we have stated, little can be learned about sports in books, and we are driven to form our own conclusions regarding them. That they do take place on original plants there is no doubt, but it would seem that this tendency to sport is greatly increased by continued reproduction from seed.

We have stated that so far as we know the Old Double White camellia has, in nearly a century and a half, never sported. Yet, when we look at that incomparable and most exquisite of all flowers, the *Camellia fimbriata*, a perfect counterpart of the Double White in leaf and form, except that its petals, pure as the driven snow, are as delicately cut as the most delicate of fair hands alone could cut them, throwing a charming fringe around each petal, we think this too, was a sport saved by some observing and enthusiastic cultivator of the Flowery Kingdom, and bequeathed to us as a token of the care which that heathen nation has ever bestowed upon one of the most beautiful handiworks of the Creator.

The azalea is another Chinese plant, which, at the present day, is the most "sportive" of all that we possess; in fact it has become so to such a degree, that a name signifies but little. Sometimes the flowers of striped varieties are all white, sometimes red, and at others parti-colored, and many of our varieties are perpetuations of these sports, some of which continue true, and others go back to the original.

As to the cause of these sports we have little to say. Our only theory is that, having undergone so many cross fertilizations, they have become, as we often say, "somewhat mixed," for the older

varieties of the large flowered, or rather large leaved kinds, of the *Phœnicea* and *alba* type remain very true, and sports among them are exceedingly rare,— indeed, we ourselves do not know of one.

As has been stated, the time to prepare an essay, as well as the time allowed for reading it, has been too brief to do more than to glance at the subject of sports, and bring it before you for discussion. I trust that the few instances I have mentioned of the origin of sports will show you the importance of observation. No doubt many interesting additions might have been made to our variety of plants, had the cultivators of fifty years ago been as numerous or unremitting in their labor as those of recent years. The number now who are on the lookout for every sport is legion, and the yearly additions to our catalogues show that they are not idle.

The Reciprocal Influence of Grafts and Stocks.

Here we approach that part of our essay upon which a great deal has been written and various opinions expressed, and so far as we can learn, with very little additional knowledge gained. The experiments to test the influence of stock and scion must be numerous and continued for many years to arrive at any certain results.

"The influence of the scion on the stock is very limited," says Loudon, "and as far as experience has hitherto gone, it consists only in communicating disease. The only proof of this is the fact of a bud of variegated common jasmine having been inserted in a species without variegated leaves, and having communicated its variegation to the entire plant, both above and below the graft. This, De Candolle observes, is in accordance with the theory of Moretti, that variegation, being a disease, can be propagated in a tree in every direction. We are not aware, however, that there is any example on record of a variegated holly having communicated its variegation to the stock."

The variegation communicated to the jasmine is the only instance that we in our experience know of, except with the abutilon, which is familiar to most of us here. The variegated *Abutilon Thompsoni*, as is well known, communicates its variegation to such grafts as may be inserted upon it, and *vice versa*, the new and fine sorts having been obtained in this way.

The only influence we can trace in all our experiments, extend-

ing over many years, is that a vigorous stock communicates some of its vigor to the weaker scion. The Bartlett pear and Baldwin apple in the course of a century have been grafted on millions of seedling stocks, of every degree of vigor, and probably, if they could have shown it by fruiting, of different qualities. They have also been grafted upon grafted stocks of the very best pears and apples, but to this day they are precisely the same fruits they were a century ago. It is no less surprising than true that this should be so, showing, as it does, a vital power in any plant by which it retains its character so long as it exists.

A thorough knowledge of the theory of grafting, as laid down by various authors, and particularly by Mr. Robert Thompson, will show that it is scarcely possible that there should be any influence whatever, unless that of vigor or weakness of the stock, upon the scion, and whether variegation be disease or not, the only instances of any influence have been the variegated abutilon and jasmine, for the flower of the abutilon continues precisely as it would have been on an ungrafted plant, showing conclusively that the influence is upon the leaf alone, which favors the theory of Moretti that disease can be propagated by grafting.

Time has prevented me from looking up information which might be of value. I have only endeavored to open the subject, thinking that the discussion upon it would bring out facts which the ablest authors have failed to record.

Mr. Hovey illustrated his paper by exhibiting three flowers from one plant of *Azalea punctulata variegata*, as an example of a sport in color, each of the three flowers being of a different color; and a flower of *Camellia hexangularis*, as an example of a sport in the form of a flower, the latter being only a variety of the Lady Hume. Among many instances of recent sports, he alluded to *Achyranthes Verschaffelti aureus variegatus*, and a similar one of *A. Lindeni*, which he had obtained himself and which was now known as *A. Lindeni Hoveyi*. Since attention has been turned to this subject many of these sports have been fixed. The curious conifers from Japan are probably sports. The variegated *Sciadopitys* is doubtless a sport; so also the variegated *Retinisporas* and others; so of weeping and other peculiarly formed trees. All cultivators should look through their beds of seedlings, and seize the opportunity to perpetuate such variations as are worthy. The pears with striped

fruit, like the Louise Bonne de Jersey Panacheé, and others, are undoubtedly sports, as they differ only in the color of the skin. Our definition of sports, however, applies only to bud variations. Mr. Hovey concluded with the remark that if what he had said induced cultivators to perpetuate such sports as were valuable for their beauty, he should feel repaid for writing his essay.

E. S. Rand, Jr., alluded to Mr. Hovey's mention of *Abutilon Thompsoni*, and inquired whether *A. vexillarium* had ever varied.

Mr. Hovey replied that variegations of *A. megapotamicum*, *venosum*, and *vexillarium* had been produced by grafting on *A. Thompsoni*. He did not know of any variegation of *A. insigne*, but would try it. He did not fully believe in Moretti's doctrine that these variegations are the result of disease. All our fruits have been grafted over and over again, but do not vary at all except in strength. A very strong stock will often destroy a graft of a weak kind inserted in it. This effect appears to be owing to difference in the character of the sap vessels,— the smaller vessels of the graft are unable to take all the sap brought to them by the larger vessels of the stock. It has been said that grapes which are liable to crack, like Josling's St. Albans, may be prevented by grafting on certain stocks, but the experiments which have been relied on to prove this are untrustworthy, on account of the dissimilar conditions under which they have been tried.

In answer to an inquiry by the President concerning the camellia Mrs. Anne Marie Hovey, well known as producing flowers of many different shades, Mr. Hovey said it is now twenty years since this variety was raised. He has now at least seventy-five large plants, not one of which has been propagated with reference to the place whence the scion was cut, and not one of them, to his recollection, unless it may be very small ones, only two or three years old, has failed to show the variation of the parent, sooner or later. The camellia is generally propagated by grafting, except a few strong-growing kinds, the stocks being raised from seed or cuttings.

Mr. Hovey alluded also to the Eliza Tailby rose, a sport of the Isabella Sprunt, which was itself a sport from the Safrano, as described in the Transactions of the Society for 1874, Part I, pp. 40—42.

President Parkman spoke of the Moss Rose as one of the most remarkable of all sports. It is well known to be a variation of

the cabbage rose, and sometimes returns to the original form, presenting a smooth calyx. He had known the White Four Seasons, one of the mossiest of all, to sport back both in regard to color and mossiness and to become smooth and rose-colored.

Marshall P. Wilder said that he fully believed that these sports had been the means of giving us some of the most beautiful things we possess. His experience confirmed the theory that self-colored sports are made permanent by grafting off, and do not vary. He exhibited two sports of his seedling camellia, Mrs. Abby Wilder, which he had named Abby Tryphosa Wilder and Grace Sherwin Wilder, the former of which had been sent out in Europe as a new variety under the name of Queen of Beauties. Of one of these the graft was taken from the parent plant twenty-one years ago, and of the other sixteen years ago, and neither has varied. Parti-colored flowers, especially, have in them the elements to produce self-colored sports, but self-colored sports become permanent when grafted off. Mr. Hovey does not know whether a flower of a given color, from the Mrs. Anne Marie Hovey might not become permanent. He would confirm Mr. Hovey's advice to preserve all beautiful sports.

Mr. Hovey said that the first flower produced by the Mrs. Anne Marie Hovey was a striped one. The top was inarched off twenty-one years ago, and is now twelve feet high and six feet through. This sport appears to be different from any other. They may be capable of being fixed, but they have not been in the course of twenty years. The only two-colored camellias at that time was *pæoniflora*, which was probably one of the parents of this.

Mr. Wilder said there was another instance of a camellia which varied like Mr. Hovey's seedling, and was quite similar in color and in its sports, — the Teutonia, raised about forty years ago by Mr. Gruneberg, at Frankfort-on-the-Main, which he exhibited at Vienna with nine variegated flowers on the plant, and for which he received a gold medal at Vienna and also one at Frankfort. Mr. Wilder said he would like to have Mr. Hovey take a graft from a shoot producing a white flower, and another from a shoot bearing a rose-colored flower, and graft them into separate stocks, marking them carefully to see whether the colors would be permanent. The plant which he bought as the Mrs. Anne Marie Hovey had not sported with him, as with Mr. Hovey.

In answer to an inquiry by William Gray, Jr., Mr. Wilder said

that if the self-colored graft had been left on the plant, the color would have been permanent, the same shoot continuing to produce the same self-colored flower.

William Gray, Jr., said that one remarkable sport had not been mentioned,— the purple beech. This originated in Germany from a sport, and all others have been raised from it.

Mr. Hovey remarked that the difference in purple beeches can be accounted for by their being seedlings; the true purple can be propagated only by grafting.

Mr. Wilder said that the most curious thing in regard to sports is that the descending sap of the variegated abutilon should cause variegation in the stock of a green variety.

Mr. Gray said this was the best proof of the influence of the graft on the stock, as we know that disease can be propagated by grafting.

Mr. Hovey said that he was not certain that the variegation of *Abutilon Thompsoni* was owing to disease,—it might be only a want of chlorophyll. A French writer had accounted for the brilliant colors of autumn leaves by the chemical action of acids in the leaves. Mr. Thompson has shown that it is almost impossible to influence the stock by the scion. If you cut within an eighth of an inch of the junction of the pear and quince in a dwarf pear tree, you will get a pear shoot above and a quince shoot below.

Mr. Gray said that it was immaterial whether variegation is a disease or a want of vitality. Tricolor geraniums, when grafted on green stocks, sometimes throw out a variegated shoot below the graft. Many of the silver variegated pelargoniums which show leaves wholly white, are too sick to live.

James Cruickshanks related an incident in the visit of a gentleman to the seat of a Scotch nobleman, where he saw some very handsome variegated sycamores, and when he spoke of their beauty to the nobleman the latter replied that they reminded him too much of his own diseased body.

E. W. Buswell inquired whether variegated leaved plants are not less vigorous than those with plain leaves.

Mr. Hovey replied that they were sometimes, but not always, and that this was the only reason why he had not concluded that variegation is a disease.

President Parkman remarked that the variegation of the ash-leaved negundo, and similar variegations were commonly attended

with weakness. In his view variegations of the begonia, etc., came in a different category.

Mr. Hovey remarked that, on the other hand, the variegated agave and the *Phormium tenax var.* are as strong or stronger than the plain.

Mr. Buswell said that the point which he desired to ascertain was whether a plant is *necessarily* weaker because variegated.

Mr. Hovey thought it might safely be set down as a general rule that variegated plants are weaker than the plain, like the negundo, already mentioned, and the variegated horse chestnut, but there are exceptions.

Mr. Gray agreed with Mr. Hovey, and mentioned as an exception the golden yew, which is hardier than the green.

Henry F. French desired to speak as one of those who are not so well versed in horticulture as the gentlemen who had preceded him, for he found that such could sometimes contribute to these discussions, at least by drawing out those who have more experience. He thought that while we cannot tell why one plant should bear a red flower and another a yellow one, we could not expect to account for sports. There is no difficulty in getting evidence for one side of a theory, if you will only leave out the other. Mr. Hovey has spoken of the Baldwin apple as unchanged by the thousands of stocks on which it has been grafted, but his observation had been that if you buy them by the hundred barrels from different localities, you will get apples so different, that you can hardly recognize them as the same variety. Sports of the Baldwin have also been exhibited here, some of them resembling the Roxbury Russet much more than the Baldwin. To his mind there was sufficient evidence that the Baldwin can be affected by the stock, and also of the existence of the Sweet and Sour apple, with one side sweet and the other sour, which had been doubted by some. By cultivating plants in a particular way you can change the color; the hydrangea, for instance, which by the application of charcoal, becomes purple instead of pink.

Mr. Hovey remarked that it is well for us to bear in mind that fruit does not often show the influence of a mixture of pollen the same year. Squash seed often varies when the fruit is apparently genuine. We fertilize the camellia, but see no change in the flower. The variations caused by cultivation are not permanent, for scions taken from a neglected tree and well cultivated, will produce the finest fruit.

C. M. Atkinson said that in 1840 there were no spotted calceolarias, but in that year two appeared. The raiser was very much freckled in the face, and it was said that he had produced these varieties by looking at them. Perhaps Mr. Hovey had not been able to make up his mind whether he would have a white or a pink camellia.

A. P. Calder had some lilac flowers on exhibition, to which he wished to call attention. They were of the common purple variety, but perfectly white, though they had not been grown in the shade, but in the direct rays of the sun. The plants were taken up and heeled in last autumn, and put into the greenhouse four weeks ago to-day. He had also forced what he purchased for the true Persian lilac, but the flowers had come purple. He had forced the common kind the last two years under the same treatment, and had always succeeded in producing white flowers.

Mr. Hovey said that the French grow the lilac in the dark, because they use the Persian, which has larger clusters and smaller foliage. He had forced lilacs some years ago and found it not difficult, but there was then no taste for them as in Europe. The lilac is not easily started into growth,— about every other winter you will see a paragraph in the paper stating that "the remarkably mild weather has started all the lilacs," but the buds always present a swollen appearance after a period of warm weather in winter, though they do not make any growth. Mr. Hovey had taken a lilac out of the ground and kept it in good heat from October, and it never started an atom until March, while plants kept in a cellar until February started immediately on being brought into heat.

Mr. Gray referred to Mr. Robinson's account of lilac forcing in Paris (Parks, Promenades, and Gardens of Paris, p. 537).

Mr. Calder said that his experience agreed exactly with Mr. Robinson's account, except that darkness was not necessary, nor so much heat. The Persian lilac comes so small that it is of little value.

Mr. Hovey called attention to the *Bougainvillea spectabilis*, of which a specimen was on exhibition, as very beautiful, easily grown, and almost hardy, being grown out doors in Italy. A late number of the "Gardener's Chronicle" gave an illustration of a large plant in India, which had covered a tree forty feet high. Mr.

Hovey has a plant now coming into bloom, which covers a space forty feet square, with many shoots eight feet long, which will soon be covered with the beautiful mauve colored bracts. It is one of the finest plants for a cool conservatory, and is entirely free from insects.

Mr. Wilder remarked that *B. glauca* makes a larger tree, but does not flower so well.

The President announced that at the next meeting E. S. Rand, Jr. would read a continuation of his paper on Window Gardening, giving the names of the plants best suited for parlors, with remarks on their culture.

BUSINESS MEETING.

Saturday, March 6, 1875.

An adjourned meeting of the Society was holden at 11 o'clock, President Parkman in the chair.

The following named persons were elected to membership:

Milton J. Stone, of Brookline.
Mrs. Rebekah L. Fay, of Chelsea.
Francis H. Lee, of Salem.

Meeting dissolved.

MEETING FOR DISCUSSION.

The following paper, in continuation of his former essay, presented at the meeting on February 20th, was read by the author:

Parlor Plants. II.

BY EDWARD S. RAND, JR.

We have said that one great reason of failure in the culture of window plants is the choice of unsuitable species or varieties. There are many plants, indeed a large proportion, with which

parlor culture is an impossibility. We are not able to supply the essential wants of the plant, and it sickens and dies. Yet there are many, very many plants, which may be most successfully grown, and some of these we propose to mention.

We must, however, bear in mind that very few plants will succeed if they are removed at once from the warm, moist atmosphere of the greenhouse to the parlor or living room; the change is too great, and the plant receives a shock from which it seldom recovers. Plants from a greenhouse should be gradually hardened off, and then will not suffer. Of the tens of thousands of pot plants sold from the street stands in spring, probably not one in ten survives. These plants are forced into bloom in small pots, have no constitution, and very few of them ever give another flower.

Plants taken from the garden in autumn to winter in the house should be carefully potted early in September, hardened off in the shade out of doors, and removed to the parlor when the nights become frosty; in warm sunny days they should have plenty of fresh air. Treated thus we may have autumn and early winter bloom, whereas if we delay the autumn transplanting until the plants are checked by frost, they seldom give bloom till February.

Our mention of species and varieties suited for house culture must necessarily be brief, and will be confined to winter plants. There are many flowers which do very well in rooms in summer, and which are valuable for those having no garden. Many of the plants we mention are very constant bloomers, and the foliaged species are ornamental both in winter and in summer.

Roses. — These charming and popular flowers are not well adapted for house culture. The dry air affects most varieties unfavorably, and they rarely give satisfaction. Those with very double flowers seldom expand their buds. There are, however, a few old varieties which were formerly more common than at present, and which do well and are worth growing.

The best is *Sanguinea*, a very bright, semi-double variety, flowering in clusters, and always in bloom.

Agrippina is a good pot rose.

The *Pink Monthly*, if grown to a large plant, is seldom out of bloom.

Jennie is a very fragrant tea, and though not a first class rose is well worth growing.

Safrano and *Pauline Labonté*, two of our best teas, do well if the air of the room is kept moist and not too hot.

Roses in the parlor need frequent washings or showerings, good drainage, and frequent stirring of the surface soil. If the earth in the pots is sour and sodden they soon become sickly.

Abutilon.— All the species thrive in the parlor, except perhaps the red flowered (*A. insigne*), and even this we have seen doing well. The best is the common *A. striatum*, which is always in bloom, is a very clean plant, and of symmetrical growth.

Many species are tall growers, and are too large for common cultivation; where space and sufficient light can be given, they form fine bushes which give a profusion of bloom.

A. Pattersoni or *Santana* is a very free blooming, large flowered variety of compact growth.

A. Verschaffeltii has bright sulphur-colored flowers in great profusion.

A. Thompsoni and *A. vexillarium variegatum* are valuable for their bright foliage; the former, however, requires more heat than most kinds.

A. vexillarium has charmingly contrasted flowers of red and yellow.

A. Boule de Neige is a new dwarf, free flowering, white variety, which promises to be very valuable.

All abutilons require a rich, light soil, with good drainage, and plenty of water and light. They thrive in the dry atmosphere of living rooms better than most plants, and with very little care give fine foliage and abundance of bloom.

Cuphea.— For constant bloom there is no better plant than the so called "cigar plant" (*C. platycentra*). It has bright, cheerful little flowers, grows freely, and never seems to become sickly.

Cyclamen.— The varieties of *Cyclamen Persicum* are all well suited for parlor culture. A neater, more attractive plant, it would be difficult to find, and its floriferous property is an added recommendation. The tubers should be started into growth in October, watered moderately until in active growth, then more freely. The more light and sun the better. Seedling varieties are easily obtained, and are very cheap; in color they vary from pure white to deep rosy red.

Cactus.— These are mostly summer bloomers, and all do well with but little care. There is, however, one winter blooming species, *Epiphyllum truncatum*, which is a capital window plant. Give it a light, not very rich soil, with good drainage, be careful not to overwater, and it will not fail to give satisfaction. In the

species the flowers are pink, but in the many varieties, all of which do equally well, we have many shades of red and violet, and some dazzlingly beautiful flowers. The best are *Russellianum*, *violaceum*, *tricolor*, *salmoneum album*, and *cruentum;* but all are good and worth growing.

Oxalis. — Of this charming family all the species commonly found in greenhouses may be well grown in the parlor. They should be started into growth in the room and not taken from a greenhouse. The foliage of most is neat and clover-like, and that of some beautifully cut. The flowers are pink, white, and yellow.

O. versicolor is a very pretty basket plant, beautiful in foliage, bud, and flower.

The common yellow species (*Ocernua*) is very fragrant and free blooming.

O. luxula and the variety *alba* have large pink or white flowers.

O. floribunda, both pink and white, is never out of bloom, winter or summer. Soil, rich and light, plenty of water when growing, gradually lessening the supply as the plants dry off, and perfect rest in summer until the time comes for repotting and growth.

Triteleia. — This little hardy bulb (*T. uniflora*) gives plenty of flower in a sunny window. Treat the bulbs as prescribed for *Oxalis*. The flower varies from pearly white to blue, and continues long in beauty. The odor of garlic which pervades the plant is not perceived unless the blossoms are gathered. Bulbs cost only a few cents each. It is one of the best and most easily grown window plants.

Chinese Primrose. — A plant of easy culture, very free blooming, never infested with insects, and always beautiful.

Young plants raised from spring sown seed will make large blooming plants by autumn. The soil should be rich and light, and the plants should have as much sun as possible. The same plant will bloom from November to May, — indeed a fault of the plant, if fault it has, is that it often blooms itself to death. The double varieties are not as desirable as the single for house culture, and the fern leaved kinds, although elegant in foliage, possess no remarkable blooming qualities. This primrose is one of the best of window plants.

Pinks. — Many of the monthly pinks do well in the parlor. The plants should be lifted from the ground in September, and grown in a light airy room. They will not bloom freely until after

the turn of the year, but when they once begin will continue for a long time.

The three best in color are *La Pureté*, red; *Astoria*, yellow; and *President De Graw*, white.

Smilax.— This pretty vine (*Myrsiphyllum asparagoides*) may be very easily grown as a window plant, and will flower and fruit freely. Pot the tubers in autumn in rich, well drained soil, and give the plants plenty of light, with very little heat. The chief cause of failure with this plant is the heat of the room. Train the delicate shoots to a flat trellis, or let them run across the window on strings. Dust the foliage if it becomes dirty, and give air on every day when the temperature is above freezing.

Cypripedium.—One of the Lady's Slippers, *C. insigne*, is a good parlor plant. The soil should be coarse peat and fine sand. Keep the plant always moist, but never wet. It will stand any heat, but suffers from cold. The curious flowers are produced in December, and last in full beauty two months.

Pelargoniums.—The Zonale varieties are best for window culture. A rich well drained soil and plenty of sun and light are the requisites for success. If kept in the dark the plants soon become drawn, and if not frequently turned they grow one sided. The aim should be to get short, stocky growth. The varieties with variegated foliage are all pretty, and generally do well in the parlor, but they are very inferior in flower.

The species with scented foliage, familiarly known as the "rose," "lemon," "apple," "clove," "nutmeg," and "peppermint," "geraniums," are all worth growing; in flower they are inconspicuous; many of the varieties of the rose geranium have beautiful, finely cut foliage. The large flowered pelargoniums are generally unsuitable for window culture, though we have sometimes seen them well grown and bloomed.

Richardia.— The Calla Lily (*R. Æthiopica*) is one of the best window plants. Give a rich soil and plenty of water,— indeed, the plants may stand in water without injury. In spring, plant out the tubers, repotting again early in September. The dwarf variety is desirable. The species with spotted foliage must be wholly dried off in summer; its only beauty is the foliage, the flower not being especially handsome.

Azalea.—The varieties of *Azalea Indica* and *Phœnicea* bloom freely as window plants. The soil should be peaty loam and sharp

sand. The reason why azaleas so seldom bloom well in parlor culture is that care is not taken to ripen the young growth which succeeds the flowers, and in which the buds are formed for the next year's bloom. Unless the air of the room is kept moist, azaleas are apt to drop their foliage. The species, white and purple, are better for house culture than any of the varieties, and of the varieties those with large foliage succeed better than the fine leaved kinds.

Camellia.— If the room is kept cool and without furnace heat camellias may be bloomed in the parlor as well as in the greenhouse. The chief difficulty is the dropping of the flower buds, caused by dry, hot air. Do not attempt to force them, give plenty of fresh air on mild days, and there will be a fine spring bloom.

Orange.— Orange trees, where there is room for them, may be successfully grown; they require the same general culture as camellias, but will stand more heat. Cleanliness of the leaves and branches is of first importance. They bloom in spring and seldom fail to set and ripen fruit. The Chinese dwarf oranges are easily grown and flower and fruit freely.

Lemon trees do not flower or fruit as freely as the orange, and are taller growers, and less suited for house culture.

Pittosporum.—This old fashioned plant, *P. Tobira*, is now very seldom grown. It is, however, to be recommended; the foliage is hard and coriaceous, well adapted to stand a hot and dry atmosphere; the flowers are pretty, freely produced, and deliciously fragrant. It needs but little care, is seldom sickly, and thrives in any exposure.

Jasmine.—The Indian Jasmine (*J. revolutum*), is a charming, free flowering species, with rich, dark green foliage, and fragrant yellow flowers. It thrives in the parlor, and well repays the trouble of growing. Soil a light peaty loam, good drainage, and plenty of water. We have seen one plant of this species entirely filling a large bow window, and bearing hundreds of flowers.

Tropæolum. — The varieties of *Tropœolum minus*, will often make a window very gay with a profusion of bright flowers, in spring. The plants, during autumn and early winter, should have all possible light, and be kept rather dry. They will not grow much until after January; then, as the days become longer, they will make long shoots with flowers in the axil of every leaf. A pretty mode of growth is to train the shoots back and forth across the window; the flowers thus show finely from outside.

Heliotrope. — This is difficult to transplant, and if taken from the garden in autumn, gives very little satisfaction for winter blooming. The best way is to obtain a young plant in spring, pot it on during the summer, and by October it will be in fine blooming condition. With this plant, as with many others, the more sun and light the more bloom.

A great cause of the failure to bloom hard wooded plants well in the parlor is neglect of them during the summer. Parlor plants are too often, as soon as the weather gets warm, set out on a piazza, or under trees, or in a back yard, exposed to parching suns and drying winds, irregularly watered, and, in fact, generally neglected until autumn comes again. The wonder is how so many survive and why they bloom at all. Let us bear in mind that it is in the summer that these plants prepare for the winter bloom, and that they need care and attention then quite as much as in winter.

Thus have we given a list of some of the plants suited for window culture. We have purposely omitted mention of the different species of Dutch Bulbs, such as Hyacinths, Narcissus, etc.—of foliaged plants, such as Dracænas and Begonias, some of which do well—of Ferns, of Ivy, and of the large tribe of succulents, many of which are very ornamental; also summer blooming plants,—Hoyas, Fuchsias, Vallota, and a host of others. The list is quite long enough for selection.

We cannot each of us grow all, but each can choose his plants from those mentioned, and with care bestowed understandingly, there is little fear of failure. We trust more attention may be given to this mode of culture, and that, as is already done in England, prizes may in future be offered for the best specimens of window grown plants.

Charles M. Hovey, alluding to Mr. Rand's remarks on seedling cyclamens, said that the plant is propagated only by seed. People see the fine plants exhibited here, and wish to secure the same variety, but they can do it only by getting the identical plant. They have been propagated by cutting up the bulbs, but such divisions make very poor plants. The seedling plants are likely, but not certain, to be similar in color to the parent. In answer to an inquiry as to the best fertilizer for window plants, Mr. Hovey said that guano was mentioned at a former meeting, but less powerful fertilizers like the Brighton, or other preparations

are better. One ounce to a gallon of water, is sufficiently strong for any plant, and this should be used only once a week or fortnight. He knew ladies who cultivated Cambridge Pet, Perfection, and other fine flowered pelargoniums in their windows better than they are generally grown in greenhouses. *Macranthum*, an old variety, succeeds as well as any of the scarlets. It has a somewhat coriaceous foliage which does not gather dust like the downy leaved kinds, and produces clusters of flowers as large as any of the ordinary azaleas. It is figured in Sweet's "Geraniaceæ," vol. 1, No. 83.

President Parkman asked why *Daphne odora* was omitted, and Mr. Rand replied, "from sheer neglect."

W. C. Strong asked why *Coronilla glauca* was omitted, but though Mr. Rand thought it very beautiful in the greenhouse, he had never tried it as a parlor plant.

A. P. Calder said that he had used saltpetre in the greenhouse with excellent effect, in connection with a solution of cow dung. It heightened the color of violets, and was also excellent for roses. He dissolved a small handful in eight or ten gallons of water, and applied about once a week, but it must not touch the foliage. It has the desirable property of improving the color of flowers without stimulating the growth of plants. His experience in using it as above described, was on strong plants growing in the ground; on weaker plants, or those in pots, it should be much more diluted.*

Henry F. French wished to know whether greenhouse cultivators were in the habit of using commercial fertilizers, or trusting to the ordinary sources of manure.

Mr. Rand replied that in greenhouse culture the fertilizer generally used is cow manure in a finely divided form. Commercial fertilizers were seldom used.

P. Brown Hovey said that James Comley used saltpetre in his greenhouse with good effect, at the rate of a handful to a barrel of water, applied not oftener than once a month. In planting gladiolus bulbs, he opened a drill four inches deep, and strewed in saltpetre, at the rate of a handful to twenty feet in length, and chopped it into the ground, so that it should not come in direct

*The Editor feels it his duty to urge the greatest caution in the employment of so powerful a stimulant as saltpetre. Among the various methods of using it, mentioned in this discussion, the *weakest* solution is the *safest*.

contact with the bulbs, and though small when planted, they grew to an extraordinarily large size.

C. M. Hovey said that it was seldom that cultivators of parlor plants would have occasion to use any fertilizer. Ordinarily, plants well potted in autumn do not fill the pots so as to need fertilizers, but deep rooting plants, like abutilons or chrysanthemums, when the pots are filled with roots, may need them ; or late in the season, when the soil is partially exhausted, plants may be benefited by the application of some fertilizer to keep them in continuous bloom. Mr. Hovey repeated the remark made at a previous meeting that stirring the soil in a pot was often preferable to applying a fertilizer, unless it was used very cautiously.

Mr. Strong suggested the contents of the wash-tub as a fertilizer.

President Parkman asked whether there was not danger of the grease in soapsuds forming a surface coating which would prevent moisture from reaching the soil.

C. M. Hovey replied that the stirring of the soil would prevent this. He added that the subject before us regarding a selection of plants does not admit of much discussion, but he would enforce the fact that azaleas and camellias must be kept cool in the early part of the winter. A chamber or kitchen, where the temperature does not rise above 40° or 45° at night, is much better than a living room where it is usually kept at 65°, and may rise to 70° or 80° in a warm day and the buds cannot possibly be kept on. When the public learn to look at the stout, short jointed plant, without flowers, as preferable to a weak, slender one with a cluster of blossoms at the end, and to purchase such for parlor culture, they will succeed much better than they do now. They should also learn the distinction between greenhouse and hothouse plants.

Mr. Rand objected to camellias in kitchens, — his experience has been that kitchens are often nearer 100° than 40°.

Mr. French inquired about the cultivation of ivies. Some have an idea that they should be turned out of the pot in summer. Some think they should be exposed to severe frost, while others would not expose them to frost at all.

C. M. Atkinson replied that the ivy is a native of the Canary Islands, and, though acclimated in England, will do very well without frost.

It has been said that the cyclamen can be propagated only by seed, but he saw at North Easton plants as big as a hat which had

been propagated by cutting the bulbs in four pieces, and only one was lost out of thirteen or fourteen.

He had used saltpetre at the rate of a teaspoonful to four gallons of water, with good effect, but would use it as carefully as gunpowder, and then only for certain classes of plants. A safe criterion of its strength is to take a drop of the solution on the finger and taste it: if it has the least taste it is strong enough.

He had found the safest and simplest manure for a plant after it has filled the pot, to be liquid manure made by putting a two bushel bag of horse or cow droppings, according to the nature of the plant for which it was to be used, but generally cow, in a hogshead of water, and using when the water got the color of tea. A French writer lately stated that he had renewed old mushroom beds by such an application. Oldaker did the same thing forty years ago. Mr. Atkinson preferred cow manure for camellias, and when he used horse manure preferred it in a fresh state. For azaleas he used "Standin's Gardener's and Amateur's Friend," an English preparation. He had never known azaleas injured by liquid manure, and had found soot water excellent.

To come back to parlor culture, he had never known good plants raised in a room lighted by gas and warmed by a fiery dragon in the cellar in the shape of a furnace, but when the plants were in a bay window which was shut off from the rest of the room, they succeeded. He had known two old women raise scarlet geraniums that would make a gardener's mouth water. He advised cultivators of plants in parlors to keep the leaves well washed, but to avoid liquid manure.

Mr. Wilder remarked that Van Houtte, the great Belgian cultivator of azaleas and other greenhouse plants, uses no other fertilizer than Scheldt water and cow manure. In regard to the propagation of the cyclamen, thirty-five years ago the system generally used was by cutting up the bulbs.

C. M. Hovey agreed with Mr. Atkinson as to the value of liquid manure, but the preparation of it from horse or cow dung was difficult for city cultivators. He had heard of a lot of sickly camellias which were top-dressed with manure and watered, and they soon recovered. Horse manure is of a heating nature, and cow manure is cooling. He applies old, decayed manure to his camellias that have been planted out, and digs it in. The method of propagating cyclamens by cutting up the bulbs is not satisfactory.

William Gray, Jr., had used liquid manure with very satisfactory results. As Mr. Atkinson had said, the secret is to use it very weak, and only after the pots are full of roots. He had tried solutions of guano and of ammonia, but preferred cow manure, of which he placed a bushel in his cistern and added more from time to time as the strength became exhausted, cleaning out the cistern once or twice a year. If too strong he diluted it. He found that this affected the flowers mainly, while guano affects both flowers and foliage. Pelargoniums will show the effect of liquid guano in forty-eight hours. You can water them with a weak solution of cow manure without the plants stopping flowering and running to wood.

James Cruickshanks said the best show of ivy he had ever known out of doors in this climate was on a brick house in Charlestown, the whole end of which was covered; but it was killed to the ground in the winter of 1857. In the city of Brooklyn whole houses are covered with it, and it keeps as green through the winter as in summer. The chapel at Oak Hill Cemetery, Georgetown, D. C., was also covered with a fine growth of ivy, but this was much injured by the severe cold of the last winter.

Mr. Gray said that he cultivated ivy out of doors for edgings to walks, and when covered in winter it thrives well, but in the house, without constant care, it becomes covered with scale.

Marshall P. Wilder alluded to a visit to the ruins of Kenilworth Castle, a few years ago, where he saw the old dilapidated walls covered with ivy, and measured the stem of one of the largest plants, which he found nearly six feet in circumference.

F. L. Harris had on exhibition flowers of *Clematis indivisa*, which, he said, is a native of New Zealand, and though introduced into England nearly thirty years ago, is quite new here. It is believed that the pure white flowers will prove valuable for commercial purposes, such as bouquets, wreaths, etc. In England it is largely cultivated as a greenhouse climber. It requires a cool temperature, say 40°, and after flowering should be pruned liberally, thinning out and shortening the long shoots, so as to produce a supply of young wood for the next winter.

MEETING FOR DISCUSSION.

Saturday, March 13, 1875.

Previous to the opening of the discussion the President remarked that the meetings had acquired rather a conversational character, and that it would be better to adhere to the rules, which were again read. He added that it would be difficult to enforce a literal compliance with the rules without interfering too much with the liberty of discussion, and he therefore trusted that all would conform to the spirit of the rules, and that all who were able to contribute any information would take part, and make the discussions as general as possible, as there is abundance of material in the society for an interesting discussion on any horticultural subject.

The following paper was then read by the author: —

Orchids for Greenhouse Culture.

BY JAMES CARTWRIGHT.

It is a great mistake to suppose that because a plant is an orchid it is necessarily of difficult culture.

In growing orchids, as in fact with every class of plants, there are certain rules to be observed, and these rules in the case of orchids are not difficult of application, nor hard to learn. Some orchids require a hot, moist atmosphere; others do very well with cool culture, while to some a high temperature is sure death.

While as yet our experience in orchid culture is limited, we can safely say that any one who has a forcing grapery or a rose pit can grow many fine orchids successfully. The culture necessary for forcing roses for the market is just what is required for growing some of the choice winter flowering orchids.

While these are always beautiful in flower, there is another aspect in which a florist can regard them, — that of a profitable investment, for the flowers always bring good prices in the market. While the multitude are satisfied with rose buds, heliotrope, and violets, there is a large and increasing class who are willing to pay liberally for the choice and beautiful, and by this class orchid flowers are appreciated.

We have been somewhat successful in growing several orchids,

and purpose to give descriptions of a few of them, with notes of their culture.

Cœlogyne cristata. — This charming plant is a native of the hills of India, and does not require a high temperature. The pseudo-bulbs are roundish and somewhat wrinkled; the leaves long, glossy green. The flowers are pure white with a crest of yellow, or nearly perfectly white; they are produced in drooping racemes in mid-winter, and last very long in perfection. It is usually grown in a rose pit or greenhouse. We grow them in peaty loam, mixed with crocks broken fine to keep the loam open and porous; the pot is filled one third full of drainage. They require plenty of water in their growing season, which is from the time they have done flowering to the beginning of September, when we give them less water—only enough to keep the plants from getting dry. During their season of rest, they should be kept in a cool place until their flower spikes begin to show, which will be in December. They require a sunny place to bring the flowers out.

For cut flowers this is one of the most useful of orchids, as it is desirable from its pure rich color, and it is to be recommended for its very free blooming qualities. Very small plants will give an abundance of bloom, and as it increases rapidly a good stock may soon be obtained from a few plants.

Lycaste Skinneri. — This very showy, free growing plant is a native of Guatemala, and has now been in cultivation more than thirty years. It is one of the most valuable plants for the gardener, as it is easily grown, flowers freely, and the blossoms are large and very showy. They also last many weeks in full beauty, and remain in perfection long after being cut. This species, when it becomes more common, will be popular as a window plant, for it requires little heat and bears a dry atmosphere more readily than most orchids, although the plant should never be allowed to get dry even when it rests.

The flowers are from three to six inches in diameter, the sepals and petals pure white, but varying to many shades of rose; the lip is almost covered with spots and streaks of carmine. The plant will often throw half a dozen flowers from one bulb.

The soil should be fibrous peat, but we have seen the plants doing well in common loam, with good drainage. After flowering, rest the plants until they begin to grow, then give them heat and plenty of water. Shade them from the direct rays of the sun, and

as the growth matures lessen the supply of water. This plant grows well in a forcing grapery, under the shade of the vines, or in a greenhouse that has shade.

Dendrobium nobile. — This is one of the oldest and one of the best of the Dendrobiums. It is a native of India, and indispensable in every orchid house, as it will give more blooms in proportion to the space it occupies than any plant we know.

The flower is white shaded with lake, and with a rich purple or lake lip, and exquisitely fragrant. The plant begins to make its growth immediately after it has done flowering, and continues till late in summer. It should have plenty of water during its growth. We use a watering-pot with a rose, so as to water all the plant; this we do several times a day, until its growth becomes mature, when we give less water. When the nights get colder, they require but little water, and may be exposed to the sun, but while they are growing we give them shade under some large plants of some kind.

While they are at rest a cool place is the best for them, say about 50°, until the flower buds are well developed, which will be in the early spring. If the plants are kept too warm in winter they start to grow and not to flower. The best soil is a mixture of peat broken in pieces about the size of walnuts, sphagnum moss, and broken crocks or charcoal; the plants should be set well up above the pot.

There are many of the orchids which can be well grown in a rose pit or greenhouse. Any one who will try those we have recommended will hardly be satisfied with these alone. There is no reason why the culture of orchids should not become a source not only of pleasure, but of profit.

Edward S. Rand, Jr., said that he was very glad to hear this paper on greenhouse orchids, for Mr. Cartwright was the first of our professional florists to undertake the culture of orchids. Those mentioned are all adapted to greenhouse culture, but the number can be largely increased. Mr. Rand went on to speak of the orchids already mentioned and others, illustrating his remarks with specimens exhibited by him, which received the prize to-day. The *Dendrobium nobile*, though flowering abundantly, had more than twice as many flowers two weeks ago. After the flowers had faded last year, the plant was kept in a house with the temperature at about 50° by night, and never raised above that point by fire

heat by day or night, though the sun heat raised it to 100°. The plant was liberally watered while making its growth, which it does in two ways,—first, by producing young plants from the sides of the pseudobulbs, and, second, by shoots from the base. After completing its growth, it was hung up in the full heat of the sun, and had no water until September. At about Thanksgiving time it was taken back into the orchid house; if taken in too early the flower buds produce shoots and no flowers. If water had not been withheld it would not have flowered at all, but would have sent out shoots and roots from every joint, which, if potted, would in a year have made strong plants. All orchids must have rest or they will give no flowers. In their native countries there is a dry season when they all look as if dry and dead.

The *Lycaste Skinneri* is very showy in flower, and almost imperishable. It can be grown in winter, and if kept shaded while in growth, it perfects very large bulbs, and will give fine bloom. *Cœlogyne cristata* requires about the same treatment as *Lycaste Skinneri*. It should have plenty of water. *Oncidium flexuosum* is well adapted to common cultivation.

Many orchids, if brought into the parlor when in bloom, will last in full beauty three to six weeks, and Mr. Rand exhibited a spike of *Oncidium luridum guttatum*, from a plant which had been in bloom for six weeks, with more than two hundred flowers. Also a small plant of *Epidendrum machrochilum*, growing on a block of wood, as an illustration of the manner of growth of many orchids; and a fine plant of *Dendrochilum glumaceum*, which, however, is not a cool orchid, but one of the most desirable for its grace, freedom of growth, beauty of foliage, and delightful fragrance.

President Parkman said that the subject of hardy native Cypripediums was closely connected, and called on Thomas P. James for information concerning them.

Mr. James replied that he had not himself grown them, but had seen different species under cultivation at the Botanic Garden in Cambridge.

Waldo O. Ross saw *Cypripedium spectabile* flowering freely in the greenhouse at Mr. Menand's, in Albany, a year ago.

Mr. Rand said that though it might be grown in greenhouses it is hardly worth while, since it does so well out of doors. It is a native of northern Maine and Canada, and perfectly hardy. He had had plants two feet high with two or three flowers on a spike.

It does well in peat soil; there is no better place for it than in a rhododendron bed; and it should have plenty of water in summer. It is the finest of all our native Cypripediums.

John Robinson had grown *Cypripedium arietinum* and *C. spectabile* successfully, but *C. acaule* had not done well with him.

President Parkman had found *C. parviflora* to do best.

E. H. Hitchings asked the president what success he had had with *Calopogon pulchellus*, of which Mr. Hitchings gave him some bulbs. Mr. Parkman answered that they survived the first season and then disappeared.

Mr. Wilder inquired whether it was not better to grow some species of orchids in pans than in crowded pots.

Charles M. Hovey said that Mr. Wilder probably alluded to *Cypripedium insigne* and *C. venustum*. Pans are better for these, because in deep pots they are apt to get too much water. The pans should be well drained. He saw this plan first in the garden of Mr. Lenoir, in New Jersey; he had pans fifteen or twenty inches in diameter, containing plants with one or two hundred flowers each. Orchids must have special treatment, and hence they have not come into general cultivation. In England he found the orchid houses so reeking with moisture and heat that ladies could not possibly enter them. Cool orchids from Mexico will grow in greenhouses which are accessible to ladies.

Mr. Cartwright said that the treatment of cool orchids is very simple: give plenty of water and heat in the growing season. Keep *Dendrobium nobile* in a cool place, and you will always retain the foliage. Through the dormant season he keeps them on a bed of slightly moist sand.

Mr. Hovey said that in England they had had a great deal of discussion of cool orchids, so that they were getting tired of it. Orchids had been recommended for cool culture which were unfitted, and consequently many had been destroyed. We have a great advantage over English cultivators in our bright sun, which enables us to grow many species in the greenhouse which cannot be so cultivated there. Our bright sun ripens up and matures the pseudo-bulbs, which all the fire heat is unable to accomplish.

Mr. Cartwright agreed with Mr. Hovey as to the advantage of sunlight for orchids, and said that he would always expose them to the sun.

Mr. Rand, in reply to an inquiry by the president, whether the

flower stalks of *Dendrobium nobile* could be cut without injury to the plant, said that they could not be. The best way is to cut the single flowers and wire them, and even then they will last longer than most flowers.

Mr. Hovey said the question of cutting the flower stalks was simply a matter of dollars and cents. If one is willing to pay two dollars to the florist to cut a flower stalk so as to have a natural spike which will keep two or three weeks, in preference to a bunch of wired flowers, the florist can judge whether it will pay for the injury to his plant. Among the orchids which can be grown at all times is the *Phaius grandifolius*, which is as easily cultivated as the Calla. The *Cypripediums—venustum*, *insigne*, and *barbatum*—are also easily grown in the greenhouse. He did not feel, as many do, that the yellow color of the *Oncidiums* was an objection. He would have a portion of yellow in every bouquet.

The Committee on Publication announced that next Saturday Charles M. Hovey would read a paper on "Gardening as a Science."

MEETING FOR DISCUSSION.

SATURDAY, March 20, 1875.

Charles M. Hovey read a paper on the History and Science of Gardening, of which, as it was quite long, only an abstract is presented.

GARDENING CONSIDERED AS A SCIENCE;

OR, THE HISTORY AND STUDY OF THE VEGETABLE KINGDOM, VIEWED IN REGARD TO THE USEFULNESS, AS WELL AS THE PLEASURE OF ITS PURSUIT.

BY CHARLES M. HOVEY.

The subject is divided into three primary sections, as follows: First, The History of Gardening; Second, The Study of the Vegetable Kingdom as a Science; and Third, The foregoing viewed in regard to the pleasure derived from their pursuit.

The first part, the History of Gardening, is sub-divided into three sections, viz.: the *Ages of Antiquity*, commencing with the earliest accounts and terminating with the foundation of the Roman Empire; the *Ancient Ages*, from the rise of the Roman Empire to its fall; and *Modern Times*, from the close of the second period to the present day.

In the first of these periods we have the Garden of Eden, and the other gardens mentioned in Scripture, especially those of Solomon, many of the plants in the last being specified. The gardens of the Assyrians and Persians were famous for their romantic and picturesque situations. Persia is the native place of most of our acclimated fruits, and its gardens were filled with fragrant flowers and cooling fruits, which have also been known in Egypt from time immemorial.

The Greeks copied their gardening, as well as their architecture, from the Persians; yet the former art did not make such rapid progress in Greece as the latter. Hence the remark of Lord Bacon in his essay on gardens, "That when ages grow up to civility and elegancy, men come to build stately sooner than to garden finely, as if gardening were the greater perfection."

In the second period, the Romans seemed to have gathered the art of gardening from the Greeks, as the latter did from the Persians; or, more probably, it travelled west with the current of civilization. The first garden mentioned in Roman history is that of Tarquinius Superbus. The next, that of Lucullus, was so grand and splendid that it rivalled those of the eastern monarchs. We have the most particular descriptions of the gardens of Pliny, which have been considered as giving the whole taste and style to European gardens up to the seventeenth century. This accomplished nobleman and philosopher possessed two villas, that of Laurentinum, a winter retreat near Rome, and the Tuscan villa in the Appenines. The gardens of these villas are said to have borne a striking resemblance to the modern Dutch and French styles; they had even their little flower gardens, bordered round with box and trees cut in curious shapes, and great attention seems to have been given to their formation and care. It is astonishing that, in an age when architecture displayed all its grandeur, a Roman consul, a polished friend of emperors, and a man of elegant literature, delighted in what would now scarcely be admired in a cottage garden.

This age was the first which produced any very interesting writers on agriculture, but their works are nearly all lost; among those which have come down to us are the writings of Cato, Varro, Pliny, Virgil, and Columella.

The third or modern period extends from the fall of the Roman Empire to the present time. During the earlier part of this period Europe was sunk in barbarism, and the art of gardening was preserved through the dark ages almost wholly by the attention paid to it by the monks. It was not until the fifteenth century that gardening was revived with other arts. The most celebrated gardens at this time were those of the great Lorenzo de Medici. The gardens of Turin, Genoa, Florence, Naples, and Milan were among the most remarkable, that of the royal residence at Milan being the finest. The park contained three thousand acres, besides culinary, botanic, and fruit gardens, orangeries, hothouses, etc.

During the two succeeding centuries the science of gardening spread throughout almost all Europe, being probably as well understood in France as in any country of the continent. But the work of bringing it to its greatest perfection seems to have been left to the British isles. It was first introduced by the Romans in the fourth century, but was lost again in the fifth, when they left Britain. Little is known of its development until the reign of Henry the Eighth in the sixteenth century, when it received that stimulus which has since carried it so vigorously on. In the eighteenth century the modern style of landscape gardening was introduced, and Pope and Addison were among its first friends; they not only wrote upon, but practised it, both having small gardens near London.

Gardening as a Science is founded on a classification of the facts which have been observed, and the establishment of the principles which govern them. The objects of gardening are two: the cultivation of vegetables and fruits for the sustenance of man, and the formation of external scenery to please the eye and afford public and private recreation. This second general division may be sub-divided into *Systematic Botany*, or plants studied in relation to their difference, nomenclature, and classification; *Vegetable Anatomy and Physiology*, or the study of plants as living beings, in which is considered the form of their organs, modes of nourishment, and multiplication; *Botanical Geography*, in which plants are considered as to climate, soil, habitation, etc.; and *Applied*

Botany, which has respect to their uses as medicinal, economical, and edible. In accordance with this view their study is arranged as follows: the history, glossology, phytography, taxonomy, organology, anatomy, chemistry, physiology, pathology, geography, and culture.

The *History* of the study of plants is coeval with the human race. The first who wrote much upon the subject was Pythagoras; to him succeeded Anaxagoras, Hippocrates, Theophrastus, Virgil, Dioscorides, and Pliny. The first attempt to arrange plants in classes and orders was made by Gesner, a native of Switzerland, in the sixteenth century. Various other systems were proposed, but it was not until that of Linnæus appeared that a satisfactory classification was devised. This, however, was an artificial system, and it was thought by many, including Linnæus himself, who published the idea in the latter part of his life, that if a natural method could be devised it would supersede the artificial. The foundation of such a system was laid by Bernard Jussieu, a Frenchman, and it was completed by his nephew, A. L. Jussieu.

Glossology may be defined as the grammar of plants, referring to the names by which they are distinguished and the terms necessary to designate their various parts with accuracy.

Phytography relates to the nomenclature of plants. The vegetable kingdom is divided into classes, orders, genera, and species; a class being distinguished by some peculiar character common in plants; an order by some character limited to a few plants belonging to a class; a more limited character constitutes a genus, and a species is a division of a genus, which by particular marks, as well as by the laws of nature, cannot be joined to any other than the one from which it originated; a variety is a deviation from a species, and a sub-variety a slight deviation from a variety. Thus the apple, according to the Linnæan system, belongs to the class *Icosandria*, order *Pentagynia*, genus *Pyrus*, and species *malus*, which is the crab apple. The cultivated apple is a variety, and a sub-variety designates the particular kind, as the Russet, Pearmain, etc. All names must be derived from the Latin or Greek, or they would soon be confounded, as every nation has a vernacular name.

Taxonomy is the classification of plants, without which the mind of man would be unequal to the task of acquiring an idea of the vegetable kingdom, but with it almost any one may attain a correct knowledge of plants.

Organology refers to the external structure of plants, vegetables being reduced to two classes, as complicated or simple, or perfect and imperfect. The organs of perfect plants are divided into conservative, as the root, trunk, branch, and leaf; and the reproductive, as the flower stalk, flower, receptacle, and fruit, all of which, though temporary, are indispensably necessary to their propagation.

Vegetable Anatomy, or the internal structure of plants, is the most interesting part of the study of the vegetable kingdom. The internal organs are reducible into component ones, called decomposite, composite, and elementary. The first are those which by the annual process of the sap are changed, in plants of a soft or juicy nature, into composite organs, or solid or woody fibre. These composite organs are of different substances, as the pith, the wood or vegetable fibre, and the outer cuticle or integument. The elementary or vascular organs are situated in the wood or between the wood and integument, and are the vessels which conduct the sap or proper juice to every part of the plant.

Vegetable Chemistry relates to the different substances produced by plants. All plants, whether trees, shrubs, or weeds are more than merely organized beings, having the power of absorbing nourishment from the earth, and by the operation of their organs elaborating it into substances useful in the arts, or necessary for the sustenance of the animal world, such as gums, resins, wax, balsams, starch, sugar, oils, cork, camphor, charcoal, ashes, alkalies, salts, extracts, tannin, caoutchouc, acids, etc.

Vegetable Physiology involves the germination, nutriment, digestion, growth, development of parts, propagation of the species, causes limiting the dispersion of their seeds, the evidence of the vitality of plants, etc. The last named point was observed by Linnæus, and published in his works. As with animals, so with plants; when the vital principle is extinct the organs cease to act and decay commences. Among the proofs of the vitality of plants are their sensibility to the stimulating influence of light and heat, and their instinct. Even in the coldest winter, when all vegetation seems totally at a stand, and the plant is stripped of every vestige of foliage, the vital principle is still at work, but as the warmth of spring returns the more rapid circulation of their juices renders their effect visible. The tendency of plants to incline their stems and turn the upper

surface of their leaves to the light, the manner in which the roots will seek the best nourishment, and the invariable direction assumed by twining stems, have been attributed to instinct.

Vegetable Pathology relates to the diseases and casualties to which vegetables are subject. Among other accidental injuries are fractures, incisions, pruning, grafting, and felling of plants, and destroying their leaves and bark. The leaves are destroyed by various insects, and frequently by the hand of the cultivator, though nothing can be more injurious. Diseases are corrupt affections of the vegetable body, arising from a vitiated state of of its juices, such as blight, canker, mildew, honey-dew, dropsy, gangrene, etiolation, suffocation, contortion, and consumption.

In conclusion, a few words on our third general division, the pleasure and usefulness of the study and cultivation of plants and vegetables, may be appropriate. The study of plants furnishes us with a knowledge of the pleasing and interesting science which has just been introduced, while their cultivation affords natural and healthy employment, both of the physical and intellectual powers. There is no truth in the remark that the study of botany is beneficial only to a few, or that to cultivate flowers merely to gratify the eye is useless. To the botanist no road is dreary, no solitude barren, nor any journey wearisome, because he finds so much to admire, so much to attract attention. He sees, even upon the rock, mosses and lichens, which by their growth and decay gradually prepare for the lofty palm and majestic oak. The traveller may, by a knowledge of botany, be enabled to distinguish the poisonous from the edible fruit which is necessary to satisfy his hunger, or even to save him from starvation. To the man of leisure or wealth the benefit derived from this pursuit is as great as that of the study of music, painting, literature, or any other of the fine arts. The mechanic or laboring man needs amusement as well as the man of leisure, and what recreation can there be more innocent and pleasant, after the toils of day, than that of the garden, where he can enjoy the cool and freshened air, and watch over his little spot of useful vegetables, and delicious fruits and beautiful flowers? where

> . . . . . "not a tree,
> A plant, a leaf, a blossom, but contains
> A folio volume; we may read and read
> And read again, and still find something new,
> Something to please and something to instruct."

The President remarked that Mr. Hovey's lecture had opened a great variety of subjects for discussion, and proposed that we should take up the matter of judicious and injudicious pruning.

W. C. Strong, Chairman of the Committee on Discussion, suggested that we should ponder the subjects presented by Mr. Hovey at our leisure, and listen to some remarks by C. M. Atkinson on roses.

Mr. Atkinson said that his remarks would be on the best way of arranging roses for exhibition, a subject in regard to which much discussion has lately been going on in England. When Mr. Sargent offered his special prizes for roses three years ago, he required that they should be arranged in boxes on a carpet of moss, instead of in the bottles previously used. Mr. Atkinson regarded this method as a great improvement, not only as showing the roses to better advantage, but because they could be brought already arranged in the exhibition boxes, instead of being laid into large boxes as is usually done. This has been found to be the case in England, and it is even stronger in our dryer atmosphere. He hoped to see this method generally introduced.

Mr. Atkinson objected to offering a prize for the best display of roses. William Paul, the great English rose grower, showed a bank of two thousand roses, and the report described it as only a wash-basket of flowers. Such displays afford no means of education; indeed, a rose show, except to the amateur, means little. He suggested that the boxes of roses should be arranged on each side of a long table, with foliage plants in the centre as a background. In an exhibition in France, which he visited in 1852 or 53, the plants were not arranged until after they were judged, and then they were arranged so as to produce the best effect as a whole. No prizes are offered on our schedule for less than six roses. Why not offer prizes for the best three, so as to give an opportunity to cultivators on a small scale to gain a prize?

Charles M. Hovey thought it was a grand idea to judge of plants before arranging them, and he asked why we should not apply the same rule to roses. As to the arrangement of roses, we should not like to see roses in boxes in our gardens, and why should we in our exhibitions? Mr. Hovey pointed to a tall vase on the table filled with graceful sprays of the Cherokee rose, and asked whether it would be better to exhibit them so, or to place them in boxes. Dr. Lindley, some few years before his death, visited an

exhibition in Belgium where the flowers were arranged in bottles in stands like ours, and in the "Gardener's Chronicle" he expressed the opinion that this method was greatly superior to that of arranging in boxes. No artificial arrangement in green boxes or yellow boxes could be as beautiful as the bouquets or single flowers.

President Parkman said that one great advantage of boxes, especially to those who live at a distance from the place of exhibition, is that the flowers can be arranged quietly at home, and then put on the train and brought to the hall in good order, while if shown in bottles they must be arranged in the confusion of the hall.

Mr. Strong thought the truth lay between the two extremes. The object of the florist is to pass a severe judgment on the flowers. He would leave it to the option of exhibitors whether to show in boxes or bottles.

William Gray, Jr., thought that all the roses should be required to be shown in boxes, and that the society should furnish the boxes. If both methods were allowed those who showed in bottles would do so at great disadvantage, for the flowers could not possibly be placed in bottles as fresh as if brought in boxes. People do not come to see a general display, and shows of two thousand varieties would be useless, as well as the bank of ten thousand flowers shown in a French exhibition. He thought it would be well to arrange the roses and plants, as suggested by Mr. Atkinson, after judging.

H. Weld Fuller approved of the exhibition of roses in boxes when offered for prizes; but thought there should be also a liberal show of flowers around the hall to make it attractive, for we have in view a double object,— we wish not only to interest and educate the people, but to draw them here to be educated, and our halls would look bare with only the prize flowers. Besides keeping the roses fresher, the moss produces the best effect, for a green ground is not only agreeable to the eye, but exhibits white and red objects to the best advantage. Red and green being complementary colors, each heightens the effect of the other.

Mr. Hovey thought Mr. Gray was quite correct in saying that roses in boxes would take the prize over those in bottles, for this arrangement originated in "doctoring" flowers. Carnations, for instance, are often kept in place by a piece of paper underneath to support the petals, or a missing petal is replaced and neatly fas-

tened in. So also defective roses might be made to deceive when shown in boxes of moss, — by tucking a little moss underneath, many large petalled roses might be kept in place. Coquette de Blanche and Marechal Niel have slender stems, so that the flowers hang over and do not show to good advantage, but when stuck in moss they stand upright.

Mr. Gray replied that Mr. Hovey could not have examined the roses shown here in boxes. They were in tin tubes, with the flowers six inches above the moss, and the petals not at all supported by it.

John G. Barker, Chairman of the Flower Committee, said that his individual opinion was in favor of boxes, and that the reason why the committee had returned to bottles for the society's prizes after having used boxes, was that exhibitors objected to the expense of furnishing boxes.

Mr. Hovey alluded to the fine specimens of the Cherokee rose on the table, from E. S. Rand, Jr., and said that to produce such flowers it must be grown very strong. He had grown it, but was unable to give it the space required. He doubted the commonly received opinion that it is a native of China, and thought it indigenous to the Southern States.

President Parkman here read from Dr. Gray's "Field, Forest, and Garden Botany," p. 126, the description of the Cherokee rose (*Rosa Sinica* or *lævigata*) which is classed with *R. bracteata*, as naturalized in the Southern States from China; and from Elliot's "Botany of South Carolina and Georgia," vol. i, p. 566, where *R. lævigata* is said, in 1821, to have "been cultivated in the gardens in Georgia for upwards of forty years under the name of the 'Cherokee Rose,' but its origin is still obscure."

Leander Wetherell asked what evidence there is that it is not native, and remarked that a grass, *Poa pratensis*, formerly supposed to be of European origin, had lately been found growing in the West, where it was deemed that it could not possibly have been introduced.

Mr. Hovey did not believe that *Rosa Sinica*, which, according to Loudon and Paxton, was not introduced into England until 1759, could have been common in Georgia in 1780. Dr. Lindley (Rosarum Monographia, p. 126) has pointed out the difference between this species and *R. lævigata*, which latter he describes as a native of Georgia.

MEETING FOR DISCUSSION.

Saturday, March 27, 1875.

In the absence of the President the chair was occupied by Marshall P. Wilder, and the discussion was introduced by the following paper: —

Subtropical Gardening.

BY WILLIAM GRAY, JR.

Subtropical gardening, so called, means the combination of plants, remarkable for habit and foliage, with the brilliant flowers, which formerly were used alone under the name of "carpet bedding."

Some years ago when this last system had reached its climax of absurdity, with its meaningless masses of glaring, unrelieved color, and its ribbon borders wandering aimlessly all over the land; taxing the resources of the largest places to raise coleus and pelargoniums by tens of thousands, a new departure was taken in Paris by the use, in the smaller parks and squares, of plants of striking foliage to relieve and diversify the masses of color.

To William Robinson, more than to any other person, is due the credit of introducing this great improvement into England. As correspondent of the "London Times" he went to Paris in 1867, and by his letters to that journal gave the impetus to the change which has revolutionized English summer gardening. He has since published many books, the main feature in all being an earnest advocacy of a more natural style, and has established "The Garden," that admirable magazine whose motto, "The Art itself is Nature," is the keynote to all his writings. And I am told that now, as is usual in gardening matters, the English excel the French in the arrangement and effect of their groups and beds.

To come nearer home: we have a climate better than that of Paris or London for the growth of tropical foliage, and are free from the constant rains which in England mar the beauty of their flowering plants.

It is not necessary to say much about the detail of cultivation; the beds must be deep and rich: mine are four feet deep, filled

with an equal mixture of loam and well rotted manure, for flowering, as well as for foliage plants. By digging over every autumn, beds so made will last many years without showing signs of exhaustion; the value of such preparation is that watering is rarely needed, even in our longest droughts. I find also that a mulch of two inches of spent hops, spread over the ground at the time of planting, is of great benefit; it keeps the ground moist, prevents hardening from rain and the cracking afterwards in the sun, keeps down weeds, and prevents the spattering of earth on the foliage which so disfigures it, especially that of variegated pelargoniums. If one wishes fine beds of bloom it is necessary to have some way of protecting them from our heavy thunder showers, which, in a few minutes, will ruin pelargoniums for a fortnight. I use light wooden frames, rather larger than the beds, covered on the top only with cotton cloth.

Among suitable plants the Canna takes the first place for beauty, for diversity of foliage and habit, for rapid growth, and, in some of the newer varieties, for the profusion of flowers almost equal to those of the gladiolus. Add to these qualities its cheapness, and the ease with which its roots can be kept through the winter, and I know of no plant that can compare with it for general usefulness.

The best kinds tried by me are,—

Anneii, tall growing, sea-green leaves, salmon flowers.

Premices de Nice, medium growing, green lance-shaped leaves, yellow flowers.

Marechal Vaillant, large growing, bronze veined leaves, orange flowers.

Nigricans, large growing, metallic leaves, flowers of no account.

Jean Vandael, large growing, green leaves, large red flowers.

Purpurea spectabilis, large growing, greenish purple leaves, scarlet flowers.

For foliage only, *Auguste Ferriere*, of the largest size, green leaved, with narrow stripes and edging of dark red, and *Discolor*, of medium size, with beautifully veined leaves of bronze and green; these two varieties have never flowered with me, but are described in M. Chate's book on "The Canna" as having orange-red flowers. For further information I would refer to the above mentioned book, where a great number of species and varieties are described.

It adds much to the effectiveness of the beds to plant their centres with tubers, and to edge them with seedlings of *Canna limbata*. Seeds started early in April will make plants large enough for this purpose by the first of June; they should be set out twelve inches apart, and eighteen inches from the older plants; they grow from two to two and a half feet in height, and having leaves to the very ground, give a massive effect and luxuriance to the beds not attained by plants from tubers alone. For color, surround these seedlings with dwarf pelargoniums, Golden Feather, or *Achyranthes Lindeni*.

Caladium esculentum, five or six in a round bed, planted not too closely; single plants of the green *Arundo donax*, surrounded by those of the variegated varieties; specimens of *Ricinus sanguineus* for red, and *Brasiliensis* for green, which will grow eight feet in height in a single season from seed, in a rich soil and with plenty of water; the dark green *Gymnothrix latifolia*, the perfection of symmetry; and *Erianthus Ravennæ*, the perfection of grace; the *Cyperus Papyrus;* and, for those who have room for winter keeping, the *Musa Ensete*, are some of the plants suitable for the purpose.

The surfaces of such beds should be carpeted with dense, low-growing plants of variegated foliage, as *Abutilon vexillarium pictum*, or the Japan honeysuckle (*Lonicera aureo-reticulata*), or flowering plants, as *Lobelia pumila grandiflora*, *Nierembergia gracilis*, or *Clematis Jackmanni*.

The Pampas Grass is another superb object; but, unlike those above mentioned (excepting *Erianthus Ravennæ*), may be left in the ground in winter; and, if covered with a large barrel with strawy manure piled up to and over the top, will generally go through unharmed, and increase in size and beauty year by year. For a perfectly hardy subject the Ailanthus, grown to the height of eight or ten feet and pruned closely back each year to the top of the stem, will send out long, drooping, pinnate leaves, which rival palms in elegance and effect. *Aralia canescens* and *Dimorphantus Mandschuricus*, entirely hardy, should have a place where room can be given them for the spread of their great leaves. If you have a rocky bank where grass will not grow, plant *Yucca filamentosa*, free flowering and the hardiest of its race.

Succulents may be used in subtropical gardening, but should be kept in beds by themselves and only planted in the more artificial parts of the grounds. A great variety of these may be grown together, — Agaves, Echeverias, and Sempervivums. Put the

largest plants in the centre, leaving room enough between to see them on all sides; finish the bed with one or more rows of *Echeveria secunda glauca*, and carpet the whole with *Sedum Corsicum*, or *pruinosum*. All kinds of geometrical designs may be worked out with these plants, remembering that much of the final effect depends on the most careful and exact planting.

Plants with colored foliage are among the most effective for this style of gardening: neither sun nor rain dim their beauty, and they do not need the constant care and attention that flowering plants must have at all seasons. I would suggest massing them in beds of simple form, circles and ovals being the best, and edging them with plants of a different color; for example: *Coleus Verschaffelti*, bordered with Golden Feather; *Achyranthes Lindeni*, bordered with the striped grass *Phalaris arundinacea picta;* or *Centaurea gymnocarpa* with a border of dwarf scarlet or pink flowering pelargoniums.

The golden Crystal Palace Gem, or Albion Cliffs (the best white-edged bedding pelargonium), edged with a blue lobelia, are types of the many arrangements that may be made from these materials.

Two of the newer bronze zonals, Harold and The Moor, may be planted in small beds by themselves, their golden centres and edges, and their brilliant chestnut zones, showing to the best advantage next the grass, with no dividing line of contrasting form or color.

Lastly, although hard to grow satisfactorily in our climate, the golden tricolors, Mrs. Pollock and Macbeth, edged with the dwarf growing and very dark coleus Emperor Napoleon, which throws the beautiful colors of the pelargoniums into high relief.

For flowering plants none are equal to the pelargoniums. These should be planted in beds of a single kind, edged with one of a different color, or with a variegated leaf, or with a plant of a different species. The best that I have tried are,—

Gen. Grant, Warrior,	Tall growing scarlets for large beds.
Coleshill, Sir Chas. Napier, Sir John Moore,	Medium in size.
Orbiculatum, Omega,	For dwarfs.

Of dark scarlets, — Douglas Pearson and Wellington.

Of pinks, — Master Christine and Pink May Queen.

The whites and salmons are not satisfactory for bedding; the former are not free flowering enough, and a better and more permanent effect can be obtained from the white-edged Albion Cliffs, or from the variegated alyssum, than from any white flowering plant with which I am acquainted. The alyssum, when well grown and full flowering, gives one of the softest and most harmonious effects to be obtained from the combination of the foliage and flower.

Centaurea candida is another beautiful edging for beds of pelargoniums, but it must not be planted too close to them, for, if shaded, it is almost sure to damp off; in fact, in a wet season it is a difficult plant to keep a line of in good order.

These are some of the materials to be used. Many things have been omitted that cannot easily be obtained, or easily grown, or kept through the winter without great expense; but these, by themselves, if well arranged, will make a garden a source of never failing pleasure to its owner and all comers; and I take it that the highest art is to get the best results from simplest means.

Palms and tree-ferns, yuccas, agaves, and musas, all so beautiful, require too much care and are too costly to be generally used.

As to arrangement it is impossible to give any but general directions, so much must depend on the size and shape, the locality, exposure, and surroundings of the garden. The foundation of all must be good turf well kept; without this no planting can be satisfactory, and perhaps the best general rule that can be given is to leave the centre open for breadth and dignity of effect and to confine the planting to the sides, following a walk making the circuit of the place.

The Chairman remarked that in his judgment Mr. Gray's paper contained more information than any other that has been read here or published on the subject.

W. C. Strong said that the highest art is in producing the best effect by the simplest means, and this is what Mr. Gray has taught us. The paper read recalled to Mr. Strong a beautiful picture which he saw abroad, — a lawn planted with beds of flowers, where one of the most prominent features was the golden pyrethrum, which seemed to light up the whole scene on a gray,

cloudy day. Plants which light up the landscape, like this and the gold and silver tricolors, are among the most desirable.

Edward S. Rand, Jr., said that though his subtropical gardening was not very extensive, he was indebted to Mr. Gray for hints which had enabled him to produce some of his best effects. Besides the plants already mentioned, the hardy shrubs of golden color, such as the golden elder and golden spiræa were very effective, and they have the advantage over white leaved plants that the latter are apt to burn, though this objection does not apply to the variegated alyssum and the Albion Cliffs pelargonium. He had made considerable use of the golden crown imperial, and of the variegated *Bulbocodium vernum*, which contrast well with the crocus, and whose foliage—unlike that of the crocus and most other spring flowering bulbs, which after blooming is quite objectionable, but cannot be removed without destroying the next season's flowers — is very attractive and showy.

H. Weld Fuller thought the *Alternanthera amœna* or *A. versicolor*, though not mentioned by Mr. Gray, very desirable for edgings or ground. It was used with excellent effect as a carpet under the large plants in the beautiful bed of succulents at Mr. Hunnewell's. It is easy of culture, uniform, and reliable. At Woodlawn Cemetery a large oval bed, which gave much satisfaction, had a dense centre of cannas, surrounded by tritomas, next *Coleus Verschaffeltii*, then achyranthes, and belts of pelargoniums, the white-edged outward, and alyssum next to a border of alternanthera. Golden pyrethrum has a fine effect if not repeated too often. The ageratum is often useful, and the blue lobelia cannot be dispensed with. Such beds as those mentioned by Mr. Gray require some border. In a mass of bloom sometimes a white *Centaurea* (*gymnocarpa*), high in the centre, overspreading like a fountain, produces an excellent effect. A novel and beautiful effect was produced at Mr. Hunnewell's by a large circle of variegated Japan honeysuckle intermingled with an outer planting of *Clematis Jackmanni;* the purple of the clematis flowers showing finely on the golden yellow of the honeysuckle.

The bed of succulents already mentioned, of which the principal features were echeverias, the smaller varieties being arranged in successive rows on an inclined rim, growing smaller to the top, with large plants of *E. metallica* in the centre, produced a striking appearance. The French, who were the first to introduce subtrop-

ical gardening, generally understand the combination of colors in all things.

The principles of arrangement are beginning to be recognized with us. There are various ways in which the results desired may be produced, varying often according to the ground, but we know that red always produces the best effect on a background of green, the two colors being complementary, and that blue and yellow next to green destroy each other by borrowing. Plants must not be mixed heterogenously except in rockwork. There should be harmony or contrast and variety. He did not believe in the glare of too many bright colors often repeated. For general purposes he thought the subdued half-tints were more pleasing, giving sweetness and repose. He loved the blue and white. High colors, like those of the Gen. Grant, Coleshill, and other pelargoniums, may, however, be massed occasionally with great success. In conclusion, Mr. Fuller expressed his high approval of all that had been said by Mr. Gray, in whose grounds he had seen most perfect masses of flowers.

James Cruickshanks remarked that there are two shrubs which come in well for lawn decoration, though expensive,—the variegated hollies and the araucarias. A good *Araucaria imbricata* is as fine an object as you can have on a lawn, where there are conveniencies for taking care of them through the winter.

William T. Brigham said that he believed in masses of color and foliage, and thought we had seen too much of flowers in stiff lines. Nature produces her flowers in masses, like those of the Californian poppy (*Eschscholtzia*), which covers the ground with a carpet of gold, or the *Nemophila*, which looks as if a patch of blue sky had fallen to the ground, or the white forget-me-not. In the tropics he had noticed the effect of the masses of "kukui" (*Aleurites triloba*), which in the darkest days has the effect of sunshine, but in no part of the world had he seen flowers growing naturally in lines. Of course there must be edgings to the beds in a garden, but they should never be filled with lines of flowers, as in the Public Garden in this city. As instances of the effect of masses, Mr. Brigham mentioned the cliffs in India covered with the dark, coriaceous leaves of the *Bombax* or cotton tree; the *Bougainvillea*, used for covering arbors, and whose floral bracts have a very grand effect; and to the cannas by the watercourses, with bananas growing up among them. The leaves of the pelargonium are not

beautiful in form, but are apt to produce an appearance of heaviness, and require slender leaves among them. He had seen very fine effects produced by beauty of form alone, without variety of color.

C. M. Atkinson thought that the plants mentioned by Mr. Fuller belonged rather to carpet gardening than to subtropical. A very handsome garden can be made of the plants mentioned by Mr. Gray with a very moderate expense for winter protection. In every garden the surroundings should be considered, and carpet gardening should be in a place by itself, backed up by larger plants. A plant omitted by Mr. Gray is the Himalaya bamboo, which grows nine or ten feet high, and the slightest breeze has a beautiful effect on it. In autumn it should be lifted and receive the protection of a cool greenhouse, or when that is not available, a shed will be sufficient in winter.

Mr. Strong agreed with Mr. Brigham, and would go a little farther, objecting not only to belts, but to too frequent massing, believing that masses as well as belts are liable to be carried to an extreme, especially where the masses are regular and formal. He alluded to the bed arranged by Mr. Fuller, and said that we lose the effect of cannas when we surround them with tritomas. We should allow plants to produce their true and natural effect, both in our exhibitions and our gardens.

Mr. Fuller said that in arranging our material we must bear in mind the area which is to be planted. We cannot produce the scenery mentioned by Mr. Brigham and Mr. Strong in a limited extent, and must sometimes depend on our plants rather than our landscape for pleasing. It is often necessary to raise beds slightly in the centre in order to show the plants. He thought the *Eschscholtzia*, which is all sunshine, and which he recollected many years ago, could sometimes be used with effect.

Mr. Brigham said that where it was necessary to have lines he would have them broken in some way. He thought that even a mullein stalk or a thistle would have an agreeable effect in relieving the monotony of the lines in the Public Garden. Carpet gardening is giving a surface to the ground; in California there is no natural grass sod as here, and the flowers previously mentioned by him, and even the *Claytonia*, form one.

The Chairman said he believed the society's money had been well expended in encouraging the introduction of the many

beautiful plants now used in our gardening. The modern style of gardening has produced plants which we cannot get along without. It is not probable that *Coleus Verschaffeltii* and the alternantheras will ever be surpassed for usefulness, while for white it is doubtful whether we shall ever see anything better than *Centaurea candida*.

Mr. Cruickshanks agreed with Mr. Brigham in condemning straight lines, and mentioned a nobleman's place in England where the disagreeable effect of a border of straight lines was broken by planting groups of holly, laurestinus, laurels, and other shrubs, of which they have so many more in England than we have here, and, between these, groups of herbaceous plants.

[Since the close of this discussion it has been suggested that the *Humea elegans* should have been included among the plants desirable for lawn decoration. Although a biennial it is well worth the trouble of growing two years. It produces the best effect when planted singly on the lawn. The Editor can testify from personal observation at the estate of the late Mrs. Ward, in Canton, Mass., to its exceedingly graceful effect when thus employed.]

Mr. Atkinson spoke of a specimen, exhibited by him, of the Swiss chard, a variety of *Beta cicla*, a species of beet of which only the tops are eaten. They are cultivated in France under the name of *poirées*. The leaf is boiled like spinage, while the stalks form a substitute for asparagus. They are sown at the same time with mangel-wurtzel, lifted in autumn, and planted in a cold frame. A three light frame will furnish a supply for an ordinary family.

Mr. Atkinson spoke also of the kohl rabi, or turnip rooted cabbage, a vegetable intermediate between the turnip and cabbage. He said the bulbs were so hard and woody that he should not have courage to boil one, but had found that when they were placed in a frame for forcing, or planted out in the open ground in spring, all the dormant eyes in the axils of the leaves, which spring from the top of the bulb, would send up shoots, which, when about the size of one's finger, were excellent boiled and eaten like asparagus.

E. W. Buswell thought Mr. Atkinson need not fear to boil the bulbs of the kohl rabi. He had found them very nice if only taken young, before growing woody.

Mr. Cruickshanks said that he grew the Swiss chard a good many years ago, and it was then known as the improved sugar beet. Only the leaf stems were used, and they were found a very good substitute for asparagus.

E. S. Rand, Jr., called attention to a spike of flowers of *Oncidium flexuosum*, exhibited by James Comley. The flowers are of a brilliant yellow color, and the spikes with their slender stems assume a very graceful position. If these flowers had remained on the plant they would probably have lasted three or four weeks, and even when cut they would endure for a week or ten days. Mr. Rand had a plant of *Oncidium luridum guttatum* which had at one time two hundred and eighty-four flowers, besides buds. He also exhibited an orchid of his own, *Cattleya pumila*, the smallest of all orchids, growing upon a block of wood. The flower is of a beautiful blush purple, with a deep purple lip. It hardly needs any rest, but after the flower is gone the plant will have no water until it begins to grow. It was imported from England a year ago, when it had only three leaves, but has made several since, and is now in a condition to be cut for a "back break." The flower is very large in proportion to the size of the plant.

The Chairman said that as this was the last meeting of the season he wished the President of the society were here to express the gratification which all must feel at the success of the meetings, and at the increased attendance which has sanctioned them. Nothing in the whole history of the society has given more satisfaction than these meetings, as the most decided step of progress ever made, and the same testimony comes from abroad, the published reports of the meetings of last year having been copied from and invariably spoken of with high approval, and he trusted that they would be continued in the future, and that all would come up prepared to make them even more successful than the series now closed.

The Corresponding Secretary corroborated the remarks of the Chair in regard to the interest of these discussions to parties abroad, and said that the reports were looked for with great interest.

The Chairman made the gratifying announcement that Mr. Gray had invited the members of the society to visit his houses and examine his pelargoniums, which were coming into bloom.

The Chairman of the Committee on Publication and Discussion gave notice that the committee would, at the quarterly meeting on the first Saturday in April, ask for the same appropriation as last year, and if granted they would offer a prize of twenty-five dollars for the best Essay on Roses, to be read at the Rose Show on Thursday, July 17.

TRANSACTIONS

OF THE

Massachusetts Horticultural Society,

FOR THE YEAR 1875.

PART II.

BOSTON:
TOLMAN & WHITE, PRINTERS, 383 WASHINGTON STREET.
1876.

The Committee on Publication and Discussion take this opportunity to repeat what they have heretofore stated, that the Society is not to be held responsible for the certainty of the statements or the correctness of the opinions expressed in the papers and discussions now or before published, but undertakes only to present these papers and discussions, or the substance of them, correctly. The award of a Prize for an Essay is not to be understood as implying that the Committee approve it in every particular, but only that they believe it calculated, *on the whole*, to promote the science or art of horticulture.

William C. Strong, *Chairman.*

TRANSACTIONS

OF THE

Massachusetts Horticultural Society.

BUSINESS MEETING.

SATURDAY, April 3, 1875.

A duly notified stated meeting of the Society was holden at 11 o'clock, President PARKMAN in the chair.

The President, in behalf of the Committee appointed to revise the By-Laws of the Society, reported a new code of By-Laws, which was read twice, and it was unanimously

Voted, That the code of By-Laws, as presented, be entered upon the Records, and lie over for consideration at the next stated meeting.

Voted, That an appropriation of three hundred dollars be made for the expenses of the Committee on Publication and Discussion.

The following named persons were elected to membership:

HENRY LEE, of Boston.
JOSEPH H. CURTIS, of Boston.

Adjourned to the first Saturday in May.

BUSINESS MEETING.

SATURDAY, May 1, 1875.

An adjourned meeting of the Society was holden at 11 o'clock, President PARKMAN in the chair.

The Corresponding Secretary presented a series of documents from the Committee of the Centennial Exhibition at Philadelphia. On motion, President Parkman, Marshall P. Wilder and Benjamin G. Smith were appointed a committee to take the matter into consideration.

George W. Humphrey, of Dedham,
C. G. Pringle, of Charlotte, Vt.,
Edward Shepard, of Lowell,
Dr. Charles W. Swan, of Boston,
B. M. Watson, of Plymouth,

were elected to membership.

Adjourned to the first Saturday in June.

BUSINESS MEETING.

Saturday, June 5, 1875.

An adjourned meeting of the Society was holden at 11 o'clock, President Parkman in the chair.

The President read the following letter:

Boston, May, 1875.

To Francis Parkman,
President of the Massachusetts Horticultural Society.

Dear Sir:

I desire to present to the Massachusetts Horticultural Society my Herbarium, containing one hundred and sixteen species and many varieties of North American Filices.

It is now three years since this Society first conferred on me the privileges of membership, and I have ever been anxious to make some return, that would indicate my high appreciation of what any one might justly regard as a great honor.

It is, therefore, partly with a view to accomplish something in this direction, and partly to supply a want seriously felt by others as well as myself while studying our native ferns, that I now consummate a long cherished purpose to prepare a collection of American Ferns that might be worthy of acceptance by the

Society, and prove a useful addition to the rich botanical treasures of our library, and I beg leave to tender to the Society through you, its honored representative, the results of my labor, with the respectful request that I may be permitted to retain the privilege (by no means, however, intended as a condition) of making such alterations and additions from time to time, as may be necessary to make the work more perfect and complete.

Respectfully,

GEO. E. DAVENPORT.

The following vote was then offered:

Voted, That the thanks of the Society be presented to George E. Davenport for the very complete and valuable collection of Ferns presented by him to this Society, and that the Society gratefully recognizes the kind interest shown by Mr. Davenport, and would express its deep appreciation not only of the gift but of the kind feelings of the giver.

E. H. Hitchings seconded the above vote, and said that the collection presented was a most excellent one, and that he rejoiced in its acquisition by the Society. He had thought of making such a collection for the Society if he had not been forestalled by Mr. Davenport.

John Robinson said he had known for a short time Mr. Davenport's intention regarding his collection of ferns, and had from time to time examined them.

Of the one hundred and thirty-one species and twenty-five varieties credited as growing in North America north of Mexico, one hundred and twenty-one species and twenty-four varieties were represented in this collection. Not only were there good specimens of each of these, but the larger portion of the species were represented by numerous specimens, exhibiting nearly every variety of form in which the fern can be found and from many (often widely different) localities.

Of the ten species not represented, at least four are doubted as being true American species, having been, in all probability, erroneously attributed to this country by certain authors, and not verified by specimens in any existing collection, thus leaving, at the most, but six species as now known to be wanting, although doubtless new species will be discovered.

Valuable autograph letters from Prof. Asa Gray, Prof. Daniel

C. Eaton, Dr. A. W. Chapman, and others, still further enrich this herbarium.

This collection is one of the best of North American Ferns, but one, that of Prof. Eaton, of New Haven, being more perfect as far as Mr. Robinson could learn. The collection at Cambridge, which was quite familiar to him, was inferior both in species and in perfection and number of specimens. As there is no one work which contains any considerable number of illustrations of North American ferns, and as all the works on botany, could they be collected here, do not contain more than two-thirds of these species, this is the only way by which a person can easily identify our ferns. The desirability of such a collection is very evident from the interest expressed in the subject by many frequenters of these rooms.

Mr. Robinson added that we can hardly realize the time and care required in collecting and arranging so large a series of specimens, and he thought the Society should feel exceedingly gratified at this result of Mr. Davenport's work, as he tells us that it is to this library and to the persons he has met here that his encouragement in the study of botany is in a great measure due.

Mr. Robinson was also very glad to learn that Mr. Davenport intended to continue his work by adding to this collection, and making it as perfect as possible.

Edward S. Rand, Jr., spoke of the much greater value of even dried specimens of plants, as compared with the best plates, and expressed the hope that this collection might be the beginning of a herbarium to include all our native plants, and which might ultimately extend to all plants.

The vote of thanks was unanimously passed.

[A catalogue of the Ferns in this collection is appended to the report of this meeting, for the information of those interested in the subject.]

The following resolution was offered by Charles O. Whitmore:

Resolved, That this Society, in consequence of the valuable services rendered to it by Dr. Jacob Bigelow, is desirous of obtaining his portrait to be placed with the other memorials of its founders, and that a committee of three be appointed to wait on Dr. Bigelow, and request him to accede to the unanimous wish of the Society.

After remarks by Marshall P. Wilder and Robert Manning, the

resolution was adopted, and the Chair appointed Charles O. Whitmore, Marshall P. Wilder and Benjamin G. Smith, as the Committee.

Marshall P. Wilder, Chairman of the Committee appointed January 2 to present a testimonial to Ex-President William C. Strong, read a letter from Mr. Strong, acknowledging the receipt of the testimonial.

Marshall P. Wilder announced to the Society the decease of Frederick Clapp and Henry W. Dutton, and on motion, Marshall P. Wilder, William C. Strong and Charles M. Hovey, were appointed a Committee to present suitable resolutions.

On motion, the President was authorized to appoint twenty-five delegates to represent this Society at the meeting of the American Pomological Society, at Chicago.

Frank Becker, of Belmont,
Mrs. S. M. Downes, of Andover,
David G. Dwight, of Boston,

were elected to membership.

Adjourned to Saturday, June 19.

Catalogue of North American Ferns in the Herbarium presented to the Massachusetts Horticultural Society, by George E. Davenport, June 5, 1875.

Acrostichum aureum, *L.*
Polypodium Plumula, *H. B. K.*
" vulgare, *L.*
" intermedium, *H. & A.*
" incanum, *Swz.*
" Scouleri, *H. & G.*
" Californicum, *Klf.*
" Phyllitidis, *L.*
" aureum, *L.*

Gymnogramme triangularis, *Klf.*
" pedata, *Klf.*
Notholæna sinuata, *Klf.*
" ferruginea, *Hook.*
" cretacea, *Mett.*
Notholæna dealbata, *Kunze.*
" Fendleri, *Kunze.*
" Newberryi, *Eaton.*
" Parryi, *Eaton*, n. sp.
" tenera, *Gillies.*

Cheilanthes Californica, *Mett.*
" Wrightii, *Hook.*
" Alabamensis, *Kunze.*
" microphylla, *Swz.*
" Fendleri, *Hook.*
" vestita, *Swz.*
" Lindheimeri, *Hook.*
" gracillima, *Eaton.*
" tomentosa, *Link.*

Cheilanthes Eatoni, *Baker.*
" lanuginosa, *Nutt.*
" Clevelandii, *Eaton*, n. sp.

Cryptogramme acrostichoides, *R. Br.*
Pellæa gracilis, *Hook.*
" Breweri, *Eaton.*
" Bridgesii, *Hook.*
" atropurpurea, *Link.*
" Wrightiana, *Hook.*
" ornithopus, "
b. var. brachypterum, *Eaton.*
Pellæa andromedæfolia, *Fée.*
" flexuosa, *Link.*
" pulchella, *Fée.*
" densa, *Hook.*

Pteris longifolia, *L.*
" cretica, *L.*
" aquilina, *L.*
b. var. caudata, *Hook.*
c. var. lanuginosa, *Hook.*

Adiantum pedatum, *L.*
" Chilense, *Klf.*
" Capillus-Veneris, *L.*

Vittaria lineata, *Swz.*

Blechnum serrulatum, *Michx.*

Lomaria Spicant, *Desv.*

Woodwardia radicans, *var.* Americanum, *Hook.*
Woodwardia Virginica, *Smith.*
" angustifolia, "

Scolopendrium vulgare, *Smith.*

Camptosorus rhizophyllus, *Link.*

Asplenium pinnatifidum, *Nutt.*
" ebenoides, *R. R. Scott.*
" Trichomanes, *L.*
b. var. incisum, *L.*
Asplenium ebeneum, *Aiton.*
b. var. serratum, *Gray.*
Asplenium viride, *Hudson.*
" montanum, *Willd.*
" Bradleyi, *Eaton.*
" Ruta-muraria, *L.*
" septentrionale, *Hoff.*
" myriophyllum, *Presl.*
" angustifolium, *Michx.*
" thelypteroides, "
" Filix-fœmina, *Bernh.*
b. var. angustum (Aspidium angustum, *Willd.*).
c. var. Michauxii, *Mett.*
d. var. cristata, *Gray.*

Phegopteris polypodioides, *Fée.*
" hexagonoptera, "
" Dryopteris, "
" alpestris, *Mett.*

Aspidium Lonchitis, *Swz.*
" munitum, *Klf.*
" acrostichoides, *Swz.*
b. var. incisum, *Gray.*
Aspidium aculeatum, *Swz.*
b. var. Braunii.
Aspidium Thelypteris, *Swz.*
" Noveboracense, *Swz.*
" patens, *Swz.*
" fragrans, *Swz.*
" spinulosum, *Swz.*
b. var. intermedium.
c. var. dumetorum, *Gray.*

Aspidium spinulosum, *Swz.*
d. var. dilatatum, *Gray.*
e. var. Boottii, *Gray.*
Aspidium cristatum, *Swz.*
b. var. Clintonianum, *Eaton.*
c. var. Floridanum (A. Floridanum, *Hook.*).
Aspidium Goldianum, *Hook.*
" argutum, *Klf.*
" Filix-mas, *Swz.*
" marginale, *Swz.*
" juglandifolium, *Kunze.*
" unitum, *R. Br.*

Struthiopteris Germanica, *Willd.*
Onoclea sensibilis, *L.*
b. var. obtusilobata, *Torrey.*

Cystopteris fragilis, *Bernh.*
b. var. dentata, *Hook.*
Cystopteris bulbifera, *Bernh.*
" montana, *Bernh.*

Woodsia Ilvensis, *R. Br.*
" hyperborea, *R. Br.*
" glabella, *R. Br.*
" scopulina, *Eaton.*
" Oregana, *Eaton.*
" obtusa, *Torrey.*

Nephrolepis exaltata, *Schott.*

Dicksonia punctilobula, *Kunze.*

Trichomanes Petersii, *Gray.*
" radicans, *Swz.*

Schizæa pusilla, *Pursh.*

Aneimia Mexicana, *Klotz.*
" adiantifolia, *Swz.*

Lygodium palmatum, *Swz.*

Osmunda regalis, *L.*
" Claytoniana, *L.*
" cinnamomea, *L.*
b. var. frondosa, *Gray.*

Botrychium simplex, *Hitch.*
b. var. compositum, *Milde.*
Botrychium boreale, *Milde.*
" Lunaria, *Swz.*
" matricariæfolium, *R. Br.*
" lanceolatum, *Angström.*
" ternatum, *Swz.*
b. var. lunarioides.
c. var. obliquum.
d. var. dissectum.
Botrychium Virginianum, *Swz.*
b. var. gracile, *Pursh.*

Ophioglossum vulgatum, *L.*
" bulbosum, *Michx.*
" nudicaule, *L. F.*

DESIDERATA.

Polypodium falcatum, *Kell.*
Notholæna candida, *Hook.*
Cheilanthes aspera, *Hook.*
" myriophylla, *Desv.*
" Cooperæ, *Eaton*, n. sp.
? " argentea, *Hook.*
? Adiantum pilosum, *Fée.*
Asplenium dentatum, *L.*
Phegopteris Dryopteris, *var.* calcareum.
? Aspidium Californicum, *Eaton.*
? " Ludovicianum, *Kunze.*

BUSINESS MEETING.

SATURDAY, June 19, 1875.

An adjourned meeting of the Society was holden at 11 o'clock, President PARKMAN in the chair.

William C. Strong offered the following vote:

Voted, That the Constitution of this Society be so amended as to conform to the code of By-Laws now before the Society for acceptance, and be merged therein, and that the code for the government of the Society be hereafter known as the "Constitution and By-Laws of the Massachusetts Horticultural Society."

The proposed amendments, being the new code of By-Laws, were read once, as required in the article providing for amendments to the Constitution, and the vote was unanimously passed.

Professor WILLIAM P. BOLLES, of Boston,

was elected to membership.

Meeting dissolved.

BUSINESS MEETING.

SATURDAY, July 3, 1875.

A quarterly meeting of the Society was holden at 11 o'clock, Vice-President Charles O. Whitmore in the chair.

In the absence of the Recording Secretary, Robert Manning was chosen secretary, *pro tem.*

William C. Strong presented the following preamble and vote, and moved their adoption:

Whereas, at a stated meeting of this Society, held April 3, 1875, the committee appointed to revise the By-Laws of the Society reported a code of By-Laws, which was then read twice:

And, *Whereas*, it was voted unanimously that the code of By-Laws as presented be entered upon the records and lie over for consideration at the next stated meeting:

And, *Whereas*, at a meeting of the Society held June 19, 1875, it was voted unanimously that the Constitution of this Society be

so amended as to conform to the code of By-Laws now before the Society for acceptance, and be merged therein, and that the code for the government of the Society be known as the Constitution and By-Laws of the Massachusetts Horticultural Society:

And, *Whereas*, the proposed amendments, being the new code of By-Laws, were read once as required in the article providing for amendments of the Constitution.

Therefore, *Voted*, That the code, as presented, be adopted as the Constitution and By-Laws of the Massachusetts Horticultural Society.

The Chair having ruled that under the present By-Laws all amendments to the proposed By-Laws must lie over three months, considerable discussion took place on this point.

The vote being taken by tellers on Mr. Strong's motion, was reported as sixty-one in favor and four against, a two-thirds vote being required; and the code of By-Laws proposed on the first Saturday in April, on the records, was accordingly declared adopted as the Constitution and By-Laws of the Massachusetts Horticultural Society.

A large number of verbal amendments to the By-Laws, offered by F. Lyman Winship, were ordered to be entered upon the records and lie over for consideration at the stated meeting in October.

Marshall P. Wilder, Chairman of the Committee, presented the following resolutions on the death of Frederick Clapp:

Resolved, That in the death of Frederick Clapp the Society has lost one of its best cultivators, and most useful and respected members, who for many years has discharged his duties as a member of the Fruit Committee with fidelity, and who, with his family, has originated many new varieties of fruits.

Resolved, That as a testimonial of regard for our lamented associate, this resolution be placed upon the records of the Society, and that a copy of the same be transmitted by the Secretary to the family of the deceased.

The resolutions were unanimously adopted.

Charles M. Hovey, from the Committee, presented the following resolutions on the decease of Henry W. Dutton:

The Society having learned with deep regret of the recent death of Henry W. Dutton, one of its oldest and most honored members:

Therefore, *Resolved*, That in the decease of Mr. Dutton this Society has lost one who not only was an active and successful

cultivator for many years, but one who always, up to the last moment of his life, felt a deep and abiding interest in the welfare and progress of our association.

Resolved, That the Society, though long deprived of his immediate labors, cannot forget the promptness, assiduity, and zeal, with which he, in years gone by, performed the arduous duties which devolved upon him, or the cordiality with which he labored with all associated with him.

Resolved, That in his death the Society has lost a sincere friend of horticultural science and a faithful chronicler of its progress, and the public an honorable, respected, and Christian man.

Resolved, That these resolutions be entered upon the records of the Society, and that its Secretary transmit a copy thereof to the family of the deceased.

The resolutions were seconded by Robert Manning, who alluded to Mr. Dutton's services as Chairman of the Committee of Arrangements in years past, and also on the Building Committee having in charge the erection of the first Horticultural Hall, and in other important positions, and to his continued interest in the Society up to the time of his decease.

Mr. Hovey said that having edited the "Magazine of Horticulture" for thirty-four years, during most of which time it was printed by Mr. Dutton, he learned to love him as a brother. He also spoke of Mr. Dutton's skill as a cultivator, especially of the dahlia.

The resolutions were unanimously adopted.

Marshall P. Wilder, in behalf of the President, reported a list of delegates to represent the Society at the meeting of the American Pomological Society at Chicago, in September next.

Adjourned to Saturday, July 17.

BUSINESS MEETING.

SATURDAY, July 17, 1875.

An adjourned meeting of the Society was holden at 11 o'clock, Vice-President Charles O. Whitmore in the chair.

Charles H. B. Breck, Chairman of the Committee appointed February 6, presented the following report:

The Committee appointed to take into consideration the matter of a public dinner at the close of the Annual Exhibition in September, have attended to that duty and would respectfully submit the following report:

First. That the Society be recommended to have a public dinner in their own or some other suitable hall, to which ladies shall be invited, and that the price of tickets to the same be fixed at two dollars.

Second. That the Society be recommended to appropriate a sum not exceeding one thousand dollars, to defray incidental expenses.

Third. That the President be requested to appoint a Committee of Arrangements, consisting of seven members, to carry the foregoing votes into effect.

The report was accepted and adopted. The chair appointed as the Committee, Charles H. B. Breck, Francis Parkman, William Gray, Jr., John C. Hovey, Hervey Davis, William H. Halliday, and E. F. Washburn. The appropriation, under the By-Laws, was laid upon the table until the first Saturday in October.

The Treasurer announced that he had received from Peter Smith, of Andover, the sum of fifty dollars to be appropriated to Special Prizes. The thanks of the Society were voted to Mr. Smith for his donation, which was placed at the disposal of the Committee for Establishing Prizes.

George B. Brown, of Boston,
Edward Haskell, of New Bedford,

were elected to membership.

Adjourned to the first Saturday in August.

BUSINESS MEETING.

Saturday, August 7, 1875.

An adjourned meeting of the Society was holden at 11 o'clock, President Parkman in the chair.

On motion, Charles O. Whitmore was added to the Committee on the Public Dinner.

The President announced to the Society, the discovery of the lost volume of its records, embracing the period from the foundation of the Society to the year 1844.

Adjourned to the first Saturday in September.

BUSINESS MEETING.

SATURDAY, September 4, 1875.

An adjourned meeting of the Society was holden at 11 o'clock, President PARKMAN in the chair.

The President read the following letter:

CAMBRIDGE, August 31, 1875.

FRANCIS PARKMAN, ESQ.,
President Massachusetts Horticultural Society.

Dear Sir:

The Cambridge Horticultural Society having decided to dispose of their Library, and wishing to place as many of its volumes as possible where they will be of the most practical use, have by vote directed me to present to the Massachusetts Horticultural Society all books in their possession which are not in your Library. After a careful examination, I find sixty-three volumes of the above class, which will be delivered at once.

Yours Respectfully,

JOHN C. HOVEY,
Chairman Library Committee,
Cambridge Horticultural Society.

Voted, That the thanks of this Society be presented to the Cambridge Horticultural Society for its liberal donation of books, and that the Secretary be instructed to transmit to that Society a copy of this vote.

In behalf of the Committee on Nominations, Charles H. B. Breck reported the nomination of candidates for the annual election on the first Saturday in October. The report was accepted and laid upon the table.

A discussion arising as to the award of premiums and the constitution of committees, the matter was laid upon the table till the stated meeting in October.

George Russell, of Somerville,
Cephas H. Brackett, of Brighton,
Samuel J. Stone, of Charlestown,

were elected to membership.

Meeting dissolved.

BUSINESS MEETING.

Saturday, October 7, 1875.

A stated meeting of the Society, being the annual meeting, was holden at 11 o'clock, Vice-President Charles O. Whitmore in the chair.

The Secretary read the call for the meeting and certified to its publication in accordance with the By-Laws.

Voted, That the Society proceed to the choice of officers, and that the polls remain open one hour. The polls were opened at ten minutes past eleven. John C. Hovey, E. W. Buswell, and Benjamin G. Smith, were appointed a Committee to receive, sort, and count the votes.

Voted, That the check list be used.

The amendments to the By-Laws proposed at the stated meeting in July, were, on motion, taken from the table for action.

Voted, That the amendments as proposed at the July meeting, and then entered upon the records, be severally adopted.

The amendment offered by Hervey Davis, to Section XXXIII of the By-Laws, was withdrawn.

Voted, That it is the sense of the Society that the last sentence of Section XXXIII, be only construed to apply to the award of prizes and not to the general award of gratuities.

Voted, That an appropriation of six hundred dollars be made to the Library Committee for the purchase of the "Flora Danica."

Marshall P. Wilder moved to amend the By-Laws by abolishing the office of Recording Secretary, as provided for in Section I,

after the first of January, 1876, and that all the duties prescribed for that officer in Section XV, be performed by the Secretary.

The amendment was read twice, and on motion, was entered upon the records.

Voted, That a committee of five be appointed by the Chair to consider what number of offices in the Society it is expedient for one individual to hold.

The Chair appointed William Gray, Jr., John C. Hovey, Henry F. French, Hervey Davis and C. M. Atkinson.

Voted, That the subject of procuring boxes for the exhibition of roses be referred to the Committee for Establishing Prizes, with full powers.

The polls were closed at ten minutes past twelve, and the Committee to receive, sort and count the votes, reported the names of officers elected for 1876.

James Bard, of Framingham,
John P. Loftus, of Boston,
James Davis, of Boston,

were elected to membership.

Adjourned to the first Saturday in November.

BUSINESS MEETING.

Saturday, November 6, 1875.

An adjourned meeting of the Society was holden at 11 o'clock, President Parkman in the chair.

Hervey Davis, Chairman of the Committee for Establishing Prizes, reported the amount required for prizes for the year 1876, as follows:

For Plants and Flowers, ...	$3,200 00
Fruits, ...	2,100 00
Vegetables, ...	1,200 00
For Gardens, ...	300 00
Total, ...	$6,800 00

Marshall P. Wilder, from the Committee, presented a report in relation to the co-operation of this Society with the National Centennial Exhibition, in 1870, recommending the passage of the following resolutions:

Resolved, That as the Massachusetts Horticultural Society has always been one of the great leaders in the promotion of the pomology of this continent, it is our duty as well as our privilege, to co-operate in the International Exhibition at Philadelphia, in 1876.

Resolved, That a committee of five be appointed with full powers to solicit contributions, forward the same, and have general superintendence of all matters pertaining thereto.

Resolved, That we recommend the appropriation of a sum not exceeding one thousand dollars, to carry out the objects of these resolutions.

The report was adopted, and it was voted that the committee be appointed by the President, and that he report at the next meeting.

William C. Strong, Chairman of the Committee on Discussion, announced the award of a prize of twenty-five dollars to William H. White, of Westborough, for an Essay on the Cultivation of the Cauliflower and Cabbage, which would be read immediately on the close of the business meeting.

John C. Bancroft, of Canton,

was elected to membership.

Adjourned to the first Saturday in December.

MEETING FOR DISCUSSION.

At this meeting, the prize essay, mentioned by Mr. Strong, was read as follows:

Culture of the Cauliflower and Cabbage Tribe (*Brassica oleracea*).

BY WILLIAM H. WHITE.

There are some five varieties of the *Brassica oleracea* which are cultivated, more or less, as garden or field crops; none of them, however, to the same extent as the common cabbage. Perhaps the second in importance is the cauliflower; certainly if we rate it as a delicate vegetable for the table it is the peer of the choicest cabbage.

While it is a most desirable variety of the cabbage tribe, it is one of the most difficult plants to grow in perfection; at least it frequently proves so with some. The production of perfect specimens is a triumph of the gardener's skill; more fail than succeed. This ought not to be, for there is no secret or royal highway to success; only a compliance with natural laws — and every kind of plant requires thus much in its culture — is needed. Few, however, are willing to go to the full extent of the requirements of the plant, or more frequently cultivators neglect even to inform themselves what those requirements are, and consequently fail of success.

Different varieties of the same family of plants frequently require different treatment with respect to soil, food, and culture. This difference may be only slight, yet is all-important to success. Some few essential requirements are common to all the different varieties of the cabbage tribe. They all want a deep, rich soil, and coolness of season, with considerable moisture.

The cauliflower and cabbage, especially, are most impatient of heat and drought when they once commence to grow and set for heads. A failure to recognize these important requisites, in our efforts at culture, is one error; a second is frequently committed in procuring seed, for few cultivated plants are more sensitive in regard to *good* and *pure* seed than are the cauliflower and cabbage, especially the former.

To produce the eatable portion, a cool atmosphere and considerable moisture are necessary — the spring and fall of the year usually give us these two essentials in better degree than summer. However much moisture may be required, a well drained soil is necessary, for standing with the feet in water is not conducive to health. Change, or new soil and variety of fertilizers, suits this class of plants better, perhaps, than the majority of vegetables, for they uniformly do best when grown only a single season in the same place. Almost any kind of manure is more acceptable to them than pig-pen, or hog manure. Lime, in moderate quantity, is essential in the soil; this, however, is usually found there naturally in sufficient quantity for all practical purposes; still light applications are an improvement.

The culture of the different varieties of the *Brassica oleracea* is so nearly alike, that directions for one will nearly as well apply to all; only a few unimportant details vary where the different

varieties vary in hardiness, and when it is desired to produce young plants for a succession of crops. For an early spring crop of cauliflowers and cabbages, the plants must be brought into condition for planting out as early as the weather will permit; and for all planting the plants require suitable age, which cannot be acquired in only a week or two, though they might be forced into suitable size, but there is a certain quality they acquire in no other way than by age. For late planting and crops, the plants are grown in the open ground. In describing the culture of the cauliflower and the cabbage it will be unnecessary to enter into details; any little modification of these can readily be made to suit varied circumstances of different varieties.

As before remarked, a first and most important essential in growing the plants, is SEED, *pure pedigree seed*, *sound* and *true*. If plants are not produced from the best of seed, no after culture will compensate therefor, and first class cauliflowers or cabbages need not be expected. The cauliflower is the most advanced improvement on nature of the cabbage tribe, and unless the *best* of seed is used it tends strongly to revert; therefore procure the best seed at any cost rather than accept and use a doubtful article at a reduced price. Many fail here, at the start, from thinking to economize a little.

Growing Plants. I will first give directions for growing plants for the later crops in the open ground — the same treatment being alike applicable to the cabbage and the cauliflower. Perhaps I should say that the most thorough course is the best, although requiring some extra labor which may seem to some unnecessary.

Seed Bed. The soil should be generously rich, deep, and mellow, and be freshly dug and worked to a fine tilth for several inches at the surface; a sandy loam works the best for a seed bed. Unless the soil is in good heart a liberal dressing of well fined stable manure or guano should be thoroughly intermixed with three or four inches of the surface. When the ground is thoroughly prepared, which should be in May, sow the seed in drills, six inches apart, thinly, compressing the soil over the seed. As soon as the plants show themselves, sow over them a dusting of soot and plaster to keep off the fly, and thin them, when second leaves are made, to two or three inches in a row. When the plants have made leaves as wide as an old copper cent, transplant into another bed of finely worked rich soil, freshly dug, six inches apart.

This transplanting tends to give them fine bushy roots, makes the plants strong and stocky, and curtails the tap root, and when finally transplanted they are more certain of success, taking root and growing sooner and more strongly. Tolerably good success may be had without this transplanting, by thinning the plants well in the seed bed, cutting the tap root off about two weeks before transplanting, and choosing the strongest and best plants for setting where to be grown.

To produce plants for an early crop to mature in June and July, we sow the seed the first week in September, and winter them over in cold frames. The seed is first sown in a well prepared bed in the open ground, as for the late crop; in the course of four or five weeks the plants are transplanted and set deeply in cold frame beds, two inches apart each way, where they can remain, to be treated as cold frames are commonly managed, till spring; the cauliflower being more tender than the cabbages, more protection to the beds will be necessary. These beds should be located where they will be sheltered from prevailing cold winds, and be banked around, deeply, with stable and yard manure. The cold frames in which cauliflower plants are wintered need considerable attention to keep the plants in the dark the shortest time consistent with safety from cold; to give sunlight when to be had, and also as much fresh air as is safe, taking off the glass and replacing as the weather is soft or cooler, covering when cold and cloudy, and at night. Stir the soil about the plants in the frame whenever practicable, to give the plants strength. All through the winter and early spring the glass should be off as much as safe during the brightest and warmest part of the day to strengthen and harden the plants. About three weeks before corn-planting time begin to leave the glass off nights as well as days.

Plants may also be grown, with less trouble, by sowing the seed in a hot-bed, or other structure for propagating, in January, and, when the plants have made a growth of two or three inches, transplanting into shallow boxes of soil two to three inches apart, and putting them in a warm place where they will not be forced; or they can be transplanted into another hot-bed partly spent, until it is safe to plant them in the open ground. If the plants are properly grown and hardened off, they are so hardy that several degrees of frost does not seem to affect them.

Preparation for Transplanting. If the weather will permit,

manure, plow, and prepare your ground for transplanting into, by the middle of April, or as early as it can be well and thoroughly done; make large applications of manure — ten to twelve cords — and fine and mix it well with the soil; work the soil deeply and thoroughly, making it mellow and fine with plow, cultivator, and harrow. Thorough work here decreases after labor in cultivation. Having accomplished this preliminary work lay off the rows, according to the requirements of the variety to be planted, from thirty to thirty-six inches apart, with the hills eighteen to thirty inches apart in the row. Regard must be had to whether the after culture is to be by horse or hand; if by hand, the rows may be nearer than if the horse and cultivator are to be used. Into each hill drop about a table-spoonful of guano, chop it into the soil well, and cover two to three inches deep with fine soil, and set the plants over this.

Transplanting. The reasons why we transplant may not properly come within the scope of this essay, still they are worthy of the careful study of intelligent cultivators. To perform the work to the best satisfaction, with the least trouble, choose a cloudy time when the soil is moist without being pasty. Carefully remove the plants from the bed into a basket; a trowel or pointed stick is good to loosen the plant, when it is pulled out by the hand and placed in a basket for dropping from. A careful boy can drop these out, one to each hill, while a man follows and as carefully sets the plants, making a hole sufficiently large and deep to hold the roots well; this hole may be made with the fingers, a trowel, or dibble. Place the roots in this hole without doubling, draw the earth over them, and gently firm it so as to press the roots; when set, the plant should stand a trifle lower than in the bed, and the soil around it should be slightly dishing. If only a few plants are to be set they can be watered out successfully by taking up only a few at a time, making a hole so that the roots will go in, holding by the stem with one hand while with the other water is poured to fill the hole; the soil settles around the roots as the water soaks away, when the remainder is filled in and firmed about the plant.

After Culture. As soon as the plants take root they should be carefully hoed, and once every week or ten days thereafter till matured, or so large that it cannot be conveniently done; a fresh, moist soil tends to early maturity. To obtain the best results

water the plants two or three times a week with chestnut colored manure water; muddy water from some stagnant pool is good. There is very little danger of a failure in a crop of cauliflowers or cabbages, provided the directions for good seed and deep, rich soil, thoroughly and frequently worked, with suitable moisture, are carried out to the letter.

The culture for fall and late crops is essentially the same as already described, except that the plants are set in June or, at latest, the first week in July, as the season may be.

In marketing, cauliflowers need careful handling. Divest them of all loose and surplus leaves, and pack them in boxes holding fifty or one hundred each, in which they are sold to the dealer. Immature heads may often be improved to tolerably fair ones by pulling them and hanging, roots upward, in a barn cellar where it is above the freezing point.

Cabbage Culture. Having given extended directions above for cauliflower culture, there remains little to be said on the culture of the cabbage. Cabbages are grown as an early, and also as a late crop. As an early crop market gardeners usually find them a money crop. A heavy sandy loam, strongly impregnated with shell lime, makes a congenial soil for this crop, as lime is a preventive of the disease known as "club-root." The same manures, etc., are applied as stated above for cauliflowers — perhaps a little lighter application answers the same purpose, but cabbages are gross feeders and need rich soil and plenty to feed on. Plants are produced as already described, and the whole culture differs in nothing essential from that directed for the cauliflower.

The most formidable foe we have to the growing, heading plants, is the new cabbage worm lately imported from Europe — the larva of the *Pieris rapæ* — which bores into and through the heads, leaving its excrement wherever it goes. A certain, effectual remedy or preventive of its working is lacking, although copiously watering the heads with saltpetre water is claimed as good, but the application needs to be often repeated; killing the butterflies and destroying their eggs is more sure, according to our experience.

Discussion.

Marshall P. Wilder said that the cauliflower was a favorite vegetable with him, and that this was a good practical essay on

their growth. In raising them very much depends on the season; in a good season he could raise them very easily, while in an unfavorable season it is very difficult to grow them.

The Chairman thought the essayist had made the subject very simple. The secret of success appears to be in constant, careful culture.

Robert Manning remarked on the difficulty of keeping cauliflowers into the winter; and said that when immature heads were hung up in the cellar, as recommended in the essay, any growth of the heads must be from the organized matter in the stems and leaves, unless some small quantity was absorbed from the air. He had planted them in the ground in the cellar and they had grown rapidly; plants taken up before the frost closed the ground in November with small heads, forming fine large heads before Christmas. In this case the plants had an opportunity to derive moisture and nourishment from the ground.

MEETING FOR DISCUSSION.

SATURDAY, November 27, 1875.

This meeting was called for the reading of the following paper, which had received a favorable award from the Committee:

AN ESSAY ON LANDSCAPE GARDENING.

BY JAMES CRUICKSHANKS.

The principles upon which Landscape Gardening is founded are intended to produce unity of design with harmony in execution, and also picturesque beauty, and where these are not combined the grand object in view is not attained.

It is necessary to consider the location of the house, with all its surroundings, the size of the place, also the views to be obtained from it, whether they are distant or circumscribed, of wood or water, tame or romantic, of mountain or meadow, of sea or land. An estate commanding such views requires very different treatment in the arrangement, from one where the house is embedded in a forest with only space enough to get a small lawn, and consequently without distant views. In forming the component parts

of a good landscape, much also depends upon the character of the scenery in view, for if the sea can be seen on the one side, and a mountain on the other, the planting would require to be bolder and more decided than if the only views to be obtained were a meadow with its flocks and herds.

These different circumstances would require to be borne in mind by any one who undertakes such work as the laying out and decorating a suburban residence in the style now practised in Landscape Gardening. Much may be learned by the attentive observer from studying the natural forests, whether on meadow or mountain side, the natural groups being, in many cases, so arranged as to give the landscape a very pleasing effect, so that little improvement could be made by the most skilful artist.

The first thing that requires attention is to have the ground properly drained, and subsoiled, and afterwards graded and enriched; also to have the places marked off for groups of trees which it is intended to plant. You will then be ready to sow the grass seed, and must be sure to procure the best mixture to produce a good lawn.

There are many opinions on this point, but after long experience with various mixtures, the kinds I have found to give the best satisfaction are as follows: eight quarts of red top, two quarts of fine top, three quarts of Rhode Island bent and three quarts of Kentucky blue, adding half a pound of white clover. These grasses when kept short will soon make a fine lawn, which is one of the best components of a good landscape. Some soils require more seed than others, but the proportion will be the same whatever the quantity required.

It is difficult to give a design for any supposed place, as almost every one differs somewhat from its next neighbor; but assuming the ground to be nearly level, or slightly undulating, with a public road in front, and rather sloping to the road than otherwise, placing the house about two-thirds of the depth of the property towards the back, will give a good opportunity to have the necessary buildings, such as the stables, carriage-house, ice-house, etc., behind the mansion where they can be shut out from view, if desired, by irregular groups of planting, which could lap over each other and thus secure privacy. This arrangement would afford space for a fine lawn in front, with small, irregular clumps of trees and flowering shrubs near the road, making the lawn look as large as possible and giving views of pleasant objects beyond.

The house being located as above stated, and say, about one-fourth of the width of the lot from either side, with an easy, curved avenue from the road, such an arrangement would give a good opportunity to get a small kitchen garden and orchard at the back of the house, with a greenhouse and grapery running about parallel with the house, and a flower garden in front of them, flowering shrubs and low evergreens forming a boundary between the flower garden and the lawn. Anything that was unsightly would thus be kept out of view, and at the same time everything required could be conveniently located.

The flower garden being a distinct department, the best effect will be produced by cultivating in it principally florist's flowers. The beauty of a lawn is lost in a great measure by introducing clumps of bedding plants through it, however artistically they may be arranged; nothing pleases the eye so well as the pure, green grass, with here and there a handsome ornamental tree judiciously located.

The buildings and drive being thus disposed of, the next thing requiring attention is the planting of the boundaries in such a manner as to afford sufficient shelter on the north and west sides, these being the quarters from which our heaviest gales come, but without giving it a too formal appearance, and at the same time taking advantage of all the most desirable views that can be obtained, and this can only be accomplished by judicious grouping.

The same may be said of the south and east sides, although they may not require to be so densely planted, unless it be to hide some unsightly object; but where a view of the sea, or the bold outline of a mountain can be obtained, the landscape gardener should be sure to take advantage of them. In planting, avoid straight rows, and let the outlines of groups be sinuously diversified, taking care to arrange the trees and shrubs according to their size and color, keeping the tallest at the back and the lightest shades of foliage on the most salient points. Small groups of ornamental trees and shrubs may be judiciously planted through the most distant parts of the lawn, but generally, single trees are all that will be required on a small place, such as the different varieties of magnolias and double thorns, *Virgilia lutea*, tulip trees, deciduous cypress, purple beech, etc., for deciduous trees; and for evergreens, Austrian pines, Cembran pines, and the various species of Retinisporas, with many others that might be named.

This gives a general idea of my system or plan for any such work as the above described, but the design must be varied according to circumstances, different locations, as before remarked, requiring different treatment, and the size of the place being also an important element for consideration.

BUSINESS MEETING.

SATURDAY, December 5, 1875.

An adjourned meeting of the Society was holden at 11 o'clock, President PARKMAN in the chair.

The President announced as the Committee on the Centennial Exhibition, Marshall P. Wilder, Charles M. Hovey, Benjamin G. Smith, John C. Hovey and Robert Manning.

On motion, the President was instructed to report the names of two additional members of said Committee.

John G. Barker, in behalf of the Garden Committee, presented the awards of premiums and gratuities for the year 1875.

The Annual Report of the Flower Committee was read by John G. Barker, Chairman.

Benjamin G. Smith, from the Committee, read the Annual Report of the Fruit Committee.

Charles N. Brackett, Chairman, read the Annual Report of the Vegetable Committee.

These reports were severally accepted and referred to the Committee on Publication.

JOEL FALES, of Walpole, was elected to membership.

Adjourned to Saturday, December 11.

BUSINESS MEETING.

SATURDAY, December 11, 1875.

An adjourned meeting of the Society was holden at 11 o'clock, Vice-President P. B. HOVEY in the chair.

The Annual Report of the Library Committee was read by the Chairman, Edward S. Rand, Jr. Accepted and referred to the Committee on Publication.

The Annual Report of the Garden Committee was read by John G. Barker. Accepted and referred to the Committee on Publication.

J. Warren Merrill introduced the following petition:

To the Honorable Senate and House of Representatives in Congress assembled:

Your petitioners respectfully represent that there is great need of a convenient, reliable, rapid, regular, and cheap mode of sending seeds, cuttings, bulbs, grafts and small plants, samples of merchandise, books, and many other small articles, and that the Post Office Department alone can supply this need. We therefore respectfully petition your honorable bodies to reduce the present rate of charge on such matter one-half, and to authorize the affixing of names, numbers, or letters to all such articles so sent as will enable the sender to designate them to the receiver.

And we also ask an enactment that will forbid the opening of any such package until it reaches its destination, when, if it proves to contain unlawful matter it shall be subjected to letter postage.

Voted, That a committee of five, of which the President shall be chairman, be appointed with full powers in behalf of this Society to petition Congress for the enactment of a law for the better and cheaper transmission of third-class mail matter.

Marshall P. Wilder, J. Warren Merrill, Robert Manning, and Edward S. Rand, Jr., were appointed, and the above petition was signed by the Committee in behalf of the Society, and also by a large number of the members.

Voted, That the Committee of Arrangements be requested to make a report of their doings, beginning with the year 1876.

William C. Strong, Chairman of the Committee on Discussion, announced that a Prize Essay by Dr. D. D. Slade, on Landscape Gardening, would be read next Saturday.

Adjourned to December 18.

BUSINESS MEETING.

SATURDAY, December 18, 1875.

An adjourned meeting of the Society was holden at 11 o'clock, President PARKMAN in the chair.

The President announced as additional members of the Committee on the Centennial, Edwin W. Buswell and Hervey Davis.

Further time was granted to the Treasurer, the Finance Committee, the Committee on Publication and Discussion, and the Editor, to prepare their several reports.

Meeting dissolved.

MEETING FOR DISCUSSION.

At this meeting the following Prize Essay was read by the author:

THE PRINCIPLES OF LANDSCAPE GARDENING, AS APPLIED TO SMALL SUBURBAN ESTATES.

BY DANIEL DENISON SLADE.

No one in our country has done more to elevate the taste and improve the judgment of the people in all matters relating to rural embellishment than the late A. J. Downing. His writings are marked by a degree of simplicity and truthfulness which renders them almost universally applicable, while at the same time, they evince an ardent love of the subjects upon which he treats.

The examples of his supervision and handiwork wherever they exist, are also truthful expressions of the noble art in which he so assiduously labored, and in which he may be said to have been the pioneer. In thus recalling his name to memory and in giving his own words upon Landscape Gardening, we would testify our admiration of the man and his works.

Downing says,* "By Landscape Gardening we understand not only an imitation in the grounds of a country residence, of the agreeable forms of nature, but an *expressive*, *harmonious*, *and refined*

* Treatise on Landscape Gardening.

imitation. In Landscape Gardening, we should aim to separate the accidental and extraneous in nature and to preserve only the spirit or essence. As an art, it does not consist as many seem to suppose, in producing a counterfeit of nature, but in *idealizing* natural beauty in a lawn, park, or garden."

A later writer, Edward Kemp,* upon this same point makes the following observations: "It may be worth while then to specifically enquire how far the *imitation* of nature is possible and right. I profess not to be of those who would carry this principle very far or into minor matters. It is in her broader teachings and general promptings that material should be gathered for practical use, and these, be it remembered, will be solely available in idealizing and exalting art. Reflections such as these, will make it plain that they who would imitate nature must do so in another way than by copying her piece-meal. They ought indeed to be *imitators* but not copyists, transcribing her spirit and not her individual expressions—her general countenance and aspect, and not her particular features."

When we take into consideration the infinite variety of circumstances which must necessarily govern in all that pertains to the laying out of even the smallest estate, whether country or suburban, and which must depend upon the habits, tastes, and associations of the owners, the situation and shape of the estate, the position and character of the dwelling and its surroundings, it is at once evident that it must be impossible to lay down any fixed laws which would be alike applicable in all cases. There are, however, certain general principles which if faithfully practised, will lead to successful results. And this is true, not only in regard to the art of Landscape Gardening, but also to that of Architecture, with which it is closely allied, and of which we shall speak in connection. Before entering upon these, it would seem necessary for the better understanding of our subject to consider briefly the characteristics which mark the two variations in natural scenery, known as the Beautiful and the Picturesque.

The Beautiful is characterized by easy flowing lines, by an absence of all abruptness, by harmony and symmetry. In ground, it is marked by gentle undulations. In trees and shrubbery, by roundness, fulness, and a luxuriance of growth, as exhibited in a

* How to lay out a Garden.

fully developed American elm. In water, by the placid lake, spread out between gradually sloping banks, or by the gently flowing, winding river or brook.

The Picturesque, on the contrary, is marked by the very opposite qualities. The ground is characterized by abruptness, and by irregular outlines. The trees by boldness and ruggedness as in the oak, and by a certain rigidity, as well as wildness, as in the mountain pine. The lake is bordered by steep and rocky shores, the river, with precipitous banks, is hurled along in a tumultuous course, while the very brook partakes of the same uncontrollable nature.

Price says,* "It is evident that picturesqueness and beauty are founded on very opposite qualities; the one on smoothness, the other on roughness — the one on gradual, the other on sudden variation — the one on ideas of youth and freshness, the other on that of age and even of decay."

Such are some of the chief distinctions between these two expressions as exhibited in natural scenery. It remains for us to determine how far these expressions can be reproduced, or at least how far art can exert her sway without fear of their violation or disfigurement.

Modern Landscape Gardening may be divided into three styles or forms, which may be described as the Mixed or Gardenesque, the Picturesque, and the Formal, Geometrical, or Ancient style.

The first or Mixed style is characterized by the freedom of nature, restrained by and blended with art. In this form we may have the regularity and grace, the polish and refinement, which properly belong to the Beautiful alone, or we may have it mingled, or rather adroitly losing itself, in the Picturesque. In its production we shall suppose the surface of the ground to already possess those gentle undulations, which characterize the Beautiful in nature, for there can be no more foolish expenditure of time and money than for private individuals to undertake to effect this by artificial means, except perhaps to the most limited extent. The plantations should be so grouped and arranged as to give free development to the trees and shrubs, which should in themselves possess both luxuriance and symmetry. The same remarks apply also to the thinning out of belts or plantations of native growth.

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*An Essay on the Picturesque. By Uvedale Price.

Proper care and judgment should be exercised to avoid the methods too frequently practised of leaving single trees, which, having been drawn up in their growth, are devoid of beauty and proportion, and are liable to be prostrated by the first severe gale. They should rather be left in groups of large size which may be thinned out from time to time as occasion may demand. The walks and roads generally should be serpentine, and should follow the natural shapes of the surface, avoiding all abrupt angles. The lawn should be of the most velvety softness, and neatness combined with the most perfect order should characterize every portion of the estate.

The second or Picturesque style is marked by "extreme naturalness." Art is allowed to intrude only in the most limited degree, and is confined for the most part to those portions of the estate immediately adjacent to the buildings. The surface of the ground is to be retained in all its irregularity. The plantations, copses, and dells already existing are to be left untouched. The walks, while they are more or less angular, should be free from formality, and at a distance from the house may be allowed to become mere footpaths. The grass plots contiguous to the dwelling are of necessity to be kept with scrupulous neatness, but those at a distance are to have less care bestowed upon them. In the formation of plantations, all uniformity is to be avoided. Every kind of tree indigenous to the soil may be employed, but a predominance should be given to those that possess boldness and irregularity of outline. The groups formed, should be allowed to run into each other, and to attain their growth in the most unrestrained manner.

The third style, the Formal or Geometrical, is easily described, consisting as it does in regularity, uniformity, and the predominance of art over nature. Kemp says :* "The forms of nature which it impresses into its service are simply those which have the closest affinity to its own characteristics, and are in fact most artificial. Flights of steps, balustraded walls, terrace banks, symmetry and correspondence of parts, circles, ovals, oblong and angular beds, exotic forms of vegetation, raised platforms and sunken panels, are some of the materials with which it deals."

This style is a carrying out of the form and outlines of the building into the garden and grounds adjacent, and in consequence is more closely allied to architecture than the other forms.

* How to lay out a Garden.

We have already remarked that there were certain general principles in architecture, which must be recognized by those who would best succeed in Landscape Gardening. This fact does not seem to have received the attention which its importance demands. We have much need of the architect who shall combine a knowledge of the two arts—a combination only to be acquired by him who is at once the true lover of nature as well as of art—and who can comprehend within his glance the harmonious relations which should exist between the dwelling and its surroundings. Of these general principles we shall speak more particularly of Fitness, Purpose, and Style.

Fitness is seen not only in the convenient arrangement of the dwelling and in its situation as regards shelter and salubrity of soil, but especially in the material of which it is constructed. Owing to the great abundance, and the facilities for procuring it, wood has long been considered the most economical as well as the most suitable material for building, not only in the country villages, but even in many of the cities of New England.

In the nature of circumstances, this condition, as regards economy, cannot continue longer, for suburban residences may now be erected of either stone or brick, quite as cheaply as of wood. The first cost may undoubtedly be greater, but, if we take into consideration the constant repairs necessary and the frequent painting requisite for the preservation of wood, a very few years will show a balance in favor of the other materials. In respect to the suitableness, we maintain that either stone or brick will be found vastly superior, not only in point of durability and solidity, but also of comfort and external appearance. In fact there seems to us an entire absence of all fitness in the construction of a suburban dwelling of wood, no matter how pleasing may be its outlines, and more especially when it is surrounded by the embellishments which the hand of taste and the love of nature can create. The very idea of its want of solidity strikes us unpleasantly, and the same remark applies to all the appurtenances of the garden and adjoining grounds, such as balustrades, terrace walls and steps, pedestals, obelisks, etc., when made of this material.

Our views are entirely corroborated by Downing, when he says :* "In point of taste, a house built of wood strikes us the least

* Cottage Residences.

agreeably, as our pleasure in beholding a beautiful form is marred by the idea of the frailness of the material composing that form. We are aware that the almost universal prevalence of wooden country houses in the United States has weakened this impression, but the strength with which it strikes a European accustomed to solidity and permanence in a dwelling, is the best proof of the truth of our remark. And even in this country, the change of feeling which is daily taking place on this subject, shows very plainly in how little estimation wood will be held as a building material compared with brick or stone by the next generation."

The chief objection made to dwellings of stone is dampness. This, however, may be entirely avoided if proper care is taken in the "furring off." The furring should be done by studs secured to the floor timbers above and below, and having no connection whatever with the external walls. Or, in place of this, a lining of brick with a space of several inches between it and the stone will give greater security against fire as well as greater durability.

Brick may often be procured in the suburbs of our cities more easily than stone. It must be allowed that a brick house in the country proper does not often suggest pleasant associations, but this is owing to the ugly combinations that we have been accustomed to see. Bricks are susceptible of very pleasing effects if properly managed, as has been most abundantly shown within the last few years. For the suburban villa, cottage, or tenement, in many cases we should advocate the use of the rough, hard-burned brick in preference to the pressed, not only in point of economy, but from the fact that vines will cling to them more securely, producing a drapery which art cannot rival.

The principle of Purpose in architecture is suggested by the general appearance, or by certain features of a building; as the spire is suggestive of the church, so the windows, chimneys, porches, etc., are suggestive of the dwelling house. If then the characteristics of a building are essential to the expression of Purpose, these should be made prominent, or, at least, no attempt should be made at concealment.

The color to be given to buildings, may be properly considered in connection with the principle of Purpose. In our selection we should take nature as our guide, choosing those colors which harmonize with the natural objects about them. Neutral tints are always to be preferred for suburban residences to the positive

colors. A pure white should never be selected, as it harmonizes with nothing about it. The weather-stained tint of old houses offers the most useful lesson possible in the way of harmonious coloring.

The principle of Style is of great importance, and to this we often see all other principles of architecture sacrificed. Whatever may be the style adopted, there are certain rules to be observed.

First, there should be a unity — an adherence to the particular style chosen, without admixture with another.

Next, there should be uniformity and symmetry in the principle of Style. With the majority of individuals, regularity in a building, such as would be seen in a square house, would be preferable to irregularity, although accompanied with perfect symmetry; the perception of beauty in the latter requiring a higher cultivation of the taste and imagination.

Then again, in the adoption of any particular style, we should be guided by its adaptation to the uses intended. Thus the style of the suburban cottage should be simple and unobtrusive, no matter of what material constructed, while that of the villa or mansion may be more elaborate and dignified. The building should also be in unison with the surroundings. If these are quiet and beautiful, partaking of the Mixed or Gardenesque form, then it should correspond by its simplicity of outline, and by a certain refinement and polish. This is perhaps best exhibited in some of the classical modes of architecture, such as the Italian, Tuscan, or Venetian.

If on the other hand, the scenery, as well as the adjacent grounds, is wild and picturesque, constituting what we have spoken of as the Picturesque form of landscape gardening, the style of architecture will admit of more irregularity, and of a ruder kind of ornamentation, such as presented by the old English, the Swiss, and some forms of Gothic.

Associated most closely with the ancient or Geometrical form of landscape gardening, are the Italian and Elizabethan styles of architecture. Kemp says,* "Gardening and architecture, like all the fine arts, have much in common. And that department of architecture which belongs more exclusively to the garden, has especially a great affinity with gardening in its broader principles.

* How to lay out a Garden.

In fact, there is much more relation between the two than is usually admitted, or than the ordinary products of practitioners in either art would at all justify us in believing.

Modern tendencies in gardening have been too much *away* from its character as *an art*, and the more it is restored to its legitimate position, the more nearly will it be brought into kindred with architecture."

We confess to a great admiration for these old, stiff, formal gardens, with their accompanying architecture. They are well suited, not only for the squares and parks of cities, but also for country estates, and for small, suburban places in which there is little opportunity for variety and irregularity. In a modified way, they constituted the gardens of our fathers in New England, not only as they knew no other forms, but as they were pleasant reminders of other shores dear to their recollections. We should like to see them occupying a prominent place in the tastes of the people at the present day, when everything that smacks at all of antiquity is seized upon and treasured.

William Howitt* speaks thus pleasantly of these old gardens: "The hands of Bridgman, Kent, and Brown, and the pens of Addison, Pope, and Walpole have put all this ancient glory of Roman style to the flight, and driven us, perhaps, into danger of going too far after nature. The winding walks, the turfy lawns, the bowery shrubberies, the green slopes to the margin of waters, the retention of rocks and thickets where they naturally stood—all this is very beautiful, and many a sweet, elysian scene do they spread around our English houses. But in imitating nature, we are apt to imitate her as she appears in her rudest places, and not as she would modify herself in the vicinity of human habitations. We are apt to make too little difference between the garden and the field, between the shrubbery and the wood. We are come to think that all which differs from wild nature is artificial, and therefore absurd. It has been the fashion to cry down all gardens as ugly and tasteless, which are not shaped by our modern notions. The formalities of the French and Dutch have been sufficiently condemned; for my part, I like even them in their place. One would no more think of laying out grounds now in this manner, than of wearing Elizabethan ruffs, or bag-wigs and basket-hilted

* Rural Life of England.

swords; yet the old French and Dutch gardens, as the appendage of a quaint old house, are in my opinion, beautiful. They are like many other things, not so much beautiful in themselves, as beautiful by association, as memorials of certain characters and ages. A garden, after all, is an artificial thing, and though formed from the materials of nature, may be allowed to mould them into something very different from nature. There is a wild beauty of nature, and there is a beauty in nature likened to art; one looks for a very different kind of beauty in fields and mountains, to what one does in a garden.

When we bear in mind that many of those artifices and figures which we have been accustomed to treat with contempt as Dutch, are in reality Roman; that such things once stood in the magnificent gardens of Lucullus and Sallust, that the Romans gathered them again from the Eastern nations; that they are not only classical, but that, like many of the rites of the church, and religious festivals, they are the relics of the most ancient times; I think we shall be inclined to regard them with a greater degree of interest, not as objects to imitate, or to place in any competition with our own more natural style, but as things which are of the most remote antiquity, and give a curious diversity to our country abodes."

Of the general principles applicable to small suburban estates, we shall first speak of *Adaptation*.

It not unfrequently happens that an estate comes into one's possession upon which certain undesirable features may be presented either by the dwelling, or by the grounds, or by both, with which it is impracticable, or at least not desirable, to interfere. The only course to be pursued, in such a case, is to make the best of existing circumstances; and it is in this adaptation of means to ends that the executive abilities of the man of taste and good judgment are best exhibited, tending often to the production of the very best results.

Congruity is one of the most important principles to be kept in view in the arrangement of the smallest estate, and is one that is perhaps more frequently violated among us than almost any other. For example, it is not uncommon in looking from the house, to see upon one side of the estate, plantations of trees and shrubs arranged in natural order, and on the opposite side, a straight avenue flanked by trees in a formal manner. Here is an evident

incongruity. Again, the introduction of fruit trees among those which are strictly ornamental, especially upon a lawn, strikes the eye of taste unpleasantly; so also does the presence of vegetables among the garden flowers.

The disposal of architectural ornaments in a style different from the main house, immediately about and attached to it, as for example, those of a rustic character, are instances of the want of congruity. On the same principle, the attaching of a common greenhouse to a dwelling of any pretence to architectural style cannot be admissible.

In the arrangement of an estate, there should be one expression or leading feature, to which the others should be subordinate. This principle, termed *Unity*, should be recognized even more in small estates than in large ones, for the reason that its violation in the former is more striking and more quickly detected.

Unity, however, should not interfere with the proper introduction of *Variety*, which should be shown in the plantations, in the walks, flower-beds, and in the various garden ornaments, as well as in the vistas, recesses, pieces of water, etc. "Variety must be considered as belonging more to the details than to the production of a whole. By producing intricacy, it creates in scenery a thousand points of interest, and elicits new beauties through different arrangements and combinations of forms and colors, lights and shades."*

Simplicity is an essential element in the laying out and embellishment of the small suburban estate. It is not inconsistent with the other principles of which we have spoken, nor is it incompatible with true elegance and refinement.

Convenience never should be sacrificed to ostentation and extravagance, as is too often the case. Perhaps this mistake is more frequently made in the disposition of walks and roads than in any other way. Mr. Mitchell tells us in very pleasing words what guides we should follow in this matter.

"A walk," he says,† "is first of all a convenience; whether leading from door to highway, or to the stable court, or through gardens, or to the wood, it is essentially, and most of all, a convenience; and to despoil it of this quality, by interposing circles or curves, which have no meaning or sufficient cause, is mere

* Downing's Landscape Gardening. † My Farm of Edgewood.

affectation. Not to say, however, that all paths should be straight; the farmer, whose home is at a considerable remove from the highway, and who drives his team thither, avoiding rock and tree and hillock, will give to his line of approach a grace that it would be hard to excel by counterfeit. Pat, staggering from the orchard under a bushel of Bartlett pears, and seizing upon every accidental aid in the surface of the declivity to relieve the fatigue of his walk, zigzagging as it were in easy curves, is unconsciously laying down — though not a graceful man — a very graceful line of march. And it is the delicate interpretation of these every day deflexities, and this instinctive tortuousness (if I may so say), which supplies, or should supply, the landscape gardeners with their best formulæ."

The gardens, both flower and vegetable, should be of easy access, the stables and out-houses should be in sufficient proximity, and nothing which can contribute to comfort and convenience should be overlooked.

For the full enjoyment of even the smallest suburban estate there must be a degree of *Seclusion*. Not to be able to walk in one's garden, to meditate or walk therein, without being subjected to the gaze of neighbors or the passers by, is a condition which is not agreeable to the refined mind. This seclusion need not be such as to entirely deprive one of vistas into the distant or adjacent country, which are important addenda to every place, and for which every provision should be made, but it should be sufficient to afford that sense of quietude and freedom from interruption so dear to every man, especially a professional one, after the cares and labors of the day.

This seclusion is to be obtained by a judicious disposition of plantations and hedges, and not by high walls and fences, unless in exceptional cases.

Having thus marked out the general principles which should govern in the laying out and embellishment of the small suburban estate, it remains for us in conclusion to add that there are a vast number of places, which from the nature of circumstances, do not admit the application of any principles beyond those which neatness and order afford. And this remark applies especially to the suburbs of Boston, where there are a greater number of small estates, naturally adorned to a remarkable degree, than about any other city in the Union.

The cultivation of trees and shrubs, a well kept lawn, and a distribution of flowers constitute all that can be expected therein.

Where in other cases greater results might reasonably be looked for, — there being neither lack of means nor opportunities, — we must attribute the failure to appreciate the beautiful in nature to a want of early æsthetic culture,—a neglect in education which it behooves us not to have laid at our door by the rising generation of our countrymen.

Discussion.

H. Weld Fuller expressed his admiration of the care and taste evinced in the essay. He agreed with the essayist in approving Downing's division of natural scenery into the Picturesque and the Beautiful. Each of these classes must have its appropriate treatment — in Picturesque scenery the intricacy and ruggedness may be increased, while in the Beautiful the natural polish may be intensified. In both we should seek for harmony and congruity, and avoid abrupt transitions from one to the other. In regard to flowers, Mr. Fuller said that Nature spreads hers with great care and delicacy, and not in such profusion as to cause disgust. In wild landscapes they should be used sparingly, but in the Beautiful, where they more properly belong, they may be used more freely. He had been pleased with the remarks of the essayist on the congruity of buildings with the landscape, though he did not like the natural color of brick for country houses. He preferred wood colors. Away from the city, the Gothic style, the lines of which approach the forms of forest trees, is often appropriate. In laying out avenues through grounds, we should generally show a reason for deviations from a straight line; but may not a beautiful lawn, well displayed, be a sufficient reason? The attempt to make all situations yield to a given form would be vain. Every place must be treated according to its own peculiarities, position, and scenery. Thus in the Lyman place in Brookline, one of the most beautiful in Massachusetts, a straight avenue is the most natural approach, while the Goddard place can best be approached by a curve. Straight lines may be used in a vista, but, as remarked in the essay, they should not be closely planted on one side of the way where the other is arranged in the natural and irregular style. Mr. Fuller concluded by

saying that while it is not possible to lay down specific rules for the arrangement of all grounds, yet we may and must be guided by certain principles, which are not to be violated; and he expressed his warm approval of those laid down in the essay.

Rev. A. B. Muzzey said that he had been both pleased and instructed by Dr. Slade's essay, the completeness of which is due, not only to the study of the best authorities, but to his own reflections and original views. The remark that nature is to be *imitated*, not *copied*, was new to him; and he thought there was a great deal of sense in it. We should not seek for what is novel and strange, nor, on the other hand, should we be servile copyists, but keep under the spirit and influence of nature. In earlier times the great drift of all our activity in architecture and gardening was in the direction of utility; but now the nation has progressed far enough to make an advance on this principle, and give some attention to æstheties. The Great Architect, in his creation does not regard solely the principle of utility. In building houses and laying out grounds we often see vast sums expended with a painful disregard of the true principles of beauty. Mr. Muzzey wished the Society could be the means of diffusing a better knowledge and taste on this subject and hoped that Dr. Slade's essay would be widely circulated, as it laid down correct and important principles of beauty.

President Parkman said that devotion to the principle of utility is not the only difficulty we have to encounter. Besides that, there is a tendency in people, especially in those who have suddenly acquired wealth, by a lavish display of it to assert their equality or superiority over others. The principle of utility as well as beauty is thus sacrificed to a tasteless ostentation, and he hoped that we might encounter both these enemies successfully.

Mr. Fuller expressed the hope that the statement in the essay that greenhouses should not be attached to mansions, would be confined to common greenhouses or propagating houses. While he would object to "lean-tos" and awkward structures, he certainly should approve of a fine conservatory opening from the dining room or hall.

Dr. Slade replied that he made a distinction between conservatories corresponding in architectural character to the mansion, and greenhouses of the common style.

Charles M. Hovey thought the essay very correct in its general

ideas. In all suburban residences of the smaller size it should be impressed on the owners not to attempt too much; it should be understood at the outset that gardening is a luxury, and cannot be carried out successfully and satisfactorily without expense. How often do we see a fine residence erected at great cost, and then all improvements of any importance cease; the expense of mowing the lawn every ten days, keeping up the walks in firm condition, dressing the flower beds, etc., being too great for the purse of the owner. He thought the ordinary "lean-to" greenhouses, adjoining a mansion, entirely out of place, but for such situations they can be erected of wood or iron in style suited to the main building and without detracting from the general architectural effect, though the expense of such structures would be considerable. Too often utility is the all absorbing motive, and we frequently see persons erect greenhouses for the sale of the surplus product. As long as this is done there can be no true progress in artistic gardening. We too often see places which cause no other remark than on the amount of money expended, instead of exciting our admiration by the beauty of the plants or the artistic arrangement of the grounds. He thought Dr. Slade correct in regard to the principle of congruity, as well as of repose and seclusion about our suburban residences. In a visit to Rochester, N. Y., recently, he found people removing their front fences and throwing their grounds open to the street. There was there no opportunity to enjoy your own garden by yourself. Mr. Hovey would do away with interior fences, which too often mar the premises, but he would retain a front fence, ornamented perhaps with vines, and grouped with low shrubs, so as to afford that degree of seclusion which should be a character of every suburban home. He believed that the publication of the essay would lead to a better examination of the whole subject of Landscape Gardening. He questioned, however, the correctness of the division into the Picturesque and Beautiful, and preferred Mr. Loudon's division into the Picturesque and Gardenesque.

William C. Strong agreed with the President in his remarks and, to some extent, with Mr. Hovey's ideas in regard to front fences. As the essayist had said, we want to be protected from publicity, but Mr. Strong said he would have also a sense of openness; he disliked high fences and close hedges, but he would plant trees so as to afford protection without causing exclusiveness, and

he spoke of the advantages in this respect of the dwellings which he had seen fronting on parks in London and Liverpool. While admitting the force of what the essayist had said respecting protection from publicity, he would as much as possible preserve the appearance of openness, especially around small suburban homes, and would be careful never to plant so as to create dampness or produce a feeling of exclusiveness.

REPORTS.

REPORT

OF THE

COMMITTEE ON PLANTS AND FLOWERS,

FOR THE YEAR 1875.

By JOHN G. BARKER, Chairman.

In making up our report of the past season's work we perform a duty which, although somewhat arduous, is still in many respects pleasant, for looking over our notes of the various exhibitions brings to mind the many times that we have met each other, and the pleasant circumstances that have called us together. There is no pursuit which so much as that of horticulture brings the thoughts and minds of all near each other, and those of the creature to the Creator. All the exhibitions have been very successful, and the various prizes have been more largely competed for than at any previous season. The impromptu exhibitions have, as last year, been of great interest, and have brought out some of the rarest and best of Flora's productions. The attendance of visitors has been numerous, and it must have been gratifying to them to witness the excellent displays, which have proved not only pleasant but a source of instruction to all interested in horticulture. The evident gratification manifested by the visitors may be regarded as good proof of the favor in which the exhibitions are held. Now that our premiums are open to all, may we not reasonably expect a much larger competition for the various prizes, and a correspondingly increased interest in our work? Those whom we have been accustomed to look upon as regular exhibitors have been constant with their contributions, and we have been permitted to welcome some new ones. In endeavoring briefly to call attention to some of the most interesting objects, we find it a matter of no little difficulty, where all have been so good, to select for

notice that which is best, and instead of giving a detailed report of each exhibition separately we have taken up the different subjects by themselves.

Cyclamens.—The principal exhibitors were James O'Brien and C. B. Gardiner, and the well grown plants shown by these gentlemen were fully equal to those of last season, and showed that no pains had been spared in their cultivation. The plants exhibited on the 13th of February, that being prize day, were splendid specimens, with fine, healthy foliage, and a very large number of buds and flowers, which were well up above the foliage, showing the pretty blooms to good advantage, and fully sustaining the well earned reputation of these gentlemen as successful growers of this useful and beautiful plant.

Camellias.—As in past seasons, Hovey & Co. and Marshall P. Wilder have been the principal exhibitors. March 13th being premium day, a splendid display of twenty-seven named varieties was made by Hovey & Co., besides one of the handsomest baskets that has ever been exhibited, and also twelve fine seedlings. On the 30th of January the same gentlemen exhibited splendid flowers of Mrs. Anne Marie Hovey, C. H. Hovey, and Louisa; and again on the 2d of April a very handsome collection of seedlings, numbered from 1 to 15. The camellias from Hovey & Co. have always been quite a feature of our exhibitions, but your Committee think that the displays of the past season have been the best that have ever adorned our tables; particularly noticeable have been the magnificent seedlings, embracing nearly every shade of color, some of them very delicately marked. Marshall P. Wilder exhibited on the 30th of January cut flowers of Mrs. Julia Wilder, and on the 20th of February cut flowers of Mrs. Abby Wilder, which were exceedingly fine, showing five different gradations in color, from a pure white to a deep rose. James Comley exhibited a small plant of the new Camellia, Giovanni Santarelli.

Orchids have been exhibited by E. S. Rand, Jr., James Cartwright, Hovey & Co., Mrs. Gardner Brewer, and C. T. Hubbard. For Winter Blooming Orchids, March 13th was the prize day, when E. S. Rand, Jr., exhibited the following named species:

Cypripedium villosum.—A desirable species from the East Indies. The flowers have a fine glossy appearance over their whole surface, which is orange red intermixed with light green and dark purple; it continues a long time in flower.

Dendrobium nobile.—One of the best of orchids, of easy cultivation and free flowering, deserving a place in every collection of plants. It will do well in a warm greenhouse.

Dendrochilum glumaceum.—A very pretty species with small evergreen foliage. The flower spikes are very graceful, the flowers greenish white, very delicately scented, and last some time in perfection.

Eria stellata.

Lycaste Skinneri.—A fine winter blooming orchid from Guatemala; the flowers large and numerous, of singular form and rich color, and peculiarly attractive.

Zygopetalon Gautieri.

Saturday, July 24th, being premium day again for orchids, Mr. Rand exhibited the following varieties:

Aerides odoratum.—A fine, free growing species from India, one of the most abundant flowering of the genus. The blossoms are white, stained with pink, and have a delightful perfume.

Gongora atropurpurea.—A curious species from Trinidad.

Oncidium hæmatochilum.—A scarce orchid from New Granada; the habit is in the way of *O. Lanceanum;* sepals and petals of greenish yellow, blotched with chestnut; the lip a rich crimson and rose.

Oncidium sphacelatum majus.—A free flowering orchid from Honduras, producing long branching spikes of yellow flowers barred with dark brown.

Miltonia spectabilis.—A fine orchid from Brazil.

Thunia alba.

Vanda tricolor.—A splendid specimen; a native of Java.

In addition to the above at various times through the season we have been favored with specimens of the following named fine varieties from Mr. Rand's collection:

Aerides suavissimum.—The first time that this plant has been exhibited. It is quite distinct and seemingly of free growth. The sepals and petals are white, the lip having a blotch of yellow in the centre edged with white.

Brassavola lineata.

Cattleya Skinneri.—From Guatemala, a free flowering and beautiful plant; the flowers are a rosy purple; it is one of the best of the genus.

Cœlogyne cristata.—A dwarf evergreen species from Nepaul,

producing magnificent flowers on a drooping spike from the bottom of the bulb. They are of a beautiful white, with a blotch of yellow on the lip.

Cœlogyne speciosa. — A curious orchid from Demerara; the flowers are of a pale yellow.

Cypripedium Lowii.—A beautiful orchid from Borneo.

Cypripedium superbiens.—This handsome species is a native of Java, and is one of the best of the *barbatum* group; the foliage is finely variegated, and it continues a long time in bloom.

Dendrobium anosmum Dayanum. — A fine species from Manilla.

Dendrobium Wardianum.—A small plant, but having the appearance of being a magnificent orchid; it is figured in Warner's "Select Orchidaceous Plants."

Epidendrum macrochilum atropurpureum.—A good plant with three spikes of flowers.

Lælia Lindleyana.—Very distinct both in flower and growth; the foliage is like that of *Brassavola venosa*, and grows about eight inches long; sepals and petals of rosy white; lip of the same color, with the exception of the bottom part, which is dark rose. It blooms at different times of the year, and continues in perfection six weeks. (Williams' Orchid Grower's Manual.) This is the first plant that has been exhibited.

Leptotes serrulata.—This is a small genus from Brazil. The species is a very pretty one.

Odontoglossum grande.—A splendid species from Guatemala; the flowers are very beautiful and last in perfection several weeks.

Oncidium cornigerum.—The flowers, which are yellow, spotted with red, are very beautiful. It is a native of Brazil.

Oncidium Kramerianum.—In habit like *O. papilio*, and a very fine orchid.

Oncidium leucochilum.—A desirable species from Mexico.

Phalænopsis amabilis.—From Manilla, and very appropriately called the queen of orchids.

Pilumna fragrans.—Exhibited for the first time. In habit it is like *Trichopilia;* the flowers are produced on spikes; sepals and petals of greenish white, lip white; it is deliciously sweet scented.

Trichopilia suavis.—Two varieties of this magnificent species were exhibited.

James Cartwright sent, February 6th, a very fine plant of *Cœlogyne cristata*, having seven spikes of beautiful white flowers. It was a handsome plant and the species is the best of the genus. The flowers, if kept free from damp, will continue in perfection for several weeks. It succeeds well in a warm greenhouse. From Hovey & Co. came, May 15th, a small plant of *Cattleya Mossiæ*.

Mrs. Gardner Brewer exhibited on the 5th of June cut flowers of *Anguloa Clowesii*, *Cattleya Mossiæ*, *Calanthe veratrifolia*, and *Lælia purpurata*. C. T. Hubbard showed on the 24th of July a well grown plant of *Stanhopea tigrina*, a native of Mexico. Williams says it is the handsomest of the genus; the blossoms are very large, of a pale yellow, barred and blotched with deep chocolate.

Azaleas.—This exhibition occurred on the 10th of April; the exhibitors were Marshall P. Wilder, Hovey & Co., and James McTear. The plants from Mr. Wilder were large specimens grown in tubs, and were more fully referred to in a previous report. Those from Hovey & Co. were grown in eight inch pots, and were well trained plants in a fine variety. James McTear also exhibited a fine specimen plant of Flag of Truce, which was well grown and bloomed, with a handsome head; also six small plants of newer varieties, the names of which we did not obtain.

In addition to those already named, plants and cut flowers of some very fine varieties have been exhibited preceding and following this exhibition, principally from James Comley. Most noticeable among them were the following varieties, of which we give descriptions as far as we can:

Anna.

Baron Von Mandell.

Charmer.—Amaranth purple; good form and substance; distinct and fine.

Comtesse de Flandre.—Flower flat; light rose.

Coquette de Gand.

Donna Maria.—Tender rose, edged with white; a fine flower.

Duc de Nassau.—Very large semi-double flowers, broad and fine; dark rosy carmine, flame colored blotch; a handsome variety.

Duchesse de Nassau.

Elfride.

Flag of Truce.—Pure white, large and double; extra fine.

François de Taye.—Orange, upper lobes maroon edged with carmine; one of the finest varieties in cultivation.

Hendersonii.

Mad. Joseph Vervaene.

Mad. Vandercruyssen.—Very large flower; lively rose, large blotch.

Marie Van Houtte.—White, flaked with pink and striped with pale red; flowers semi-double and very fine.

Queen of Double Whites.

Snow White.

Souvenir de Leon Maenhaut.

Stanleyana.

Virgin Queen.

April 2d, H. H. Hunnewell exhibited two very fine specimen plants, which were trained in cone shape, and were some five feet high; they were in splendid condition, the fine healthy foliage contrasting beautifully with the flowers. The varieties were *Admiration*,—pure white flowers, spotted and flaked with carmine, large, of fine form and substance, an extra fine variety; and *Eulalie Van Geert*,—blush pink, with dark spots, flowers large, good form and substance.

May 22d, the same gentleman sent twelve plants which, although not as large, were in equally as good condition as those just mentioned, and showed that great pains had been taken in their cultivation. The beautiful foliage was particularly noticeable. The varieties were:

Alice.—Double; bright rose, dark spots.

Arthur Warocque.—Semi-double; bright rose.

Bernhard Andrea alba.—Pure white; large double flower.

Dominique Vervaene.—Bright orange red; large; very double.

Flag of Truce.—Pure white; large and double.

Mrs. George Merritt.—Rosy salmon; semi-double.

Reine des Pays-Bas.

Valerie.—Semi-double; orange with crimson spots.

Also three seedlings raised by F. L. Harris, gardener to Mr. Hunnewell, which promise well.

J. B. Moore exhibited January 23d, *Azalea obtusa*, which is said to be a distinct species from Northern China, producing fine bright scarlet flowers; and February 6th, eighteen varieties of cut flowers, most noticeable among them being the following:

Armide.
Etendard de Flandre.
Flag of Truce.
La Superba.
Punctulata variegata.
Queen of Roses.
Roi Leopold.
Snow White.
Vuurwerk.

February 20th, Mr. Moore brought plants of Vuurwerk, Bijou de Ledeberg, with variegated foliage, and Etoile de Flandre.

At the same time William Gray, Jr., exhibited three fine plants, grown in a natural style, all the training being the simple pruning of the shoots that grew out of place, with no tying whatever. These were handsome specimen plants, about three feet high and the same in diameter. The varieties were Criterion, Formosa, and Von Ghentiana.

It will be seen that azaleas formed a prominent feature at our exhibitions during the earlier part of the year, and, although the past season has witnessed an increased interest in this useful and beautiful plant, we hope, from the many large collections grown by the members of the Society, to see a further increase in the exhibition of the azalea.

Pelargoniums.—The special Pelargonium exhibition, although a new feature, was a decided success. Nearly two hundred plants were on exhibition, those from William Gray, Jr., alone filling the three platforms on the north side of the hall. Of late years a great deal of attention has been given to the cultivation and improvement of this beautiful and useful plant. As a bedding plant it has hardly an equal, and as a decorative plant for the greenhouse the fine tricolors and flowering varieties cannot be surpassed. The liberal premiums offered by the Society and the special prizes by William Gray, Jr., could hardly fail to bring out a beautiful exhibition. Hovey & Co., H. H. Hunnewell and William Gray, Jr., were the successful competitors. A list of the varieties that received prizes is appended, the descriptions of which may be found in any of the leading catalogues.

The Society's Prizes.

Zonales not variegated.

Albert Victor.
Circulator.
Delight.
Gloire de Corbeny.
Madame Mezard.
M. E. Buenzod.
Miss Gladstone.
Mrs. F. Burnaby.
Paul Brie.
Polly King.
Sir Charles Napier.
The Bride.

Variegated Zonales.

Eva Fish.
Excellent.
Florence.
Howarth Ashton.
Lass o' Gowrie.
Miss Burdett Coutts.
Miss Goring.
Mrs. Turner.
Peter Grieve.
Prince of Wales.
Prince Silverwings.
Sophia Dumaresque.

Bronzes.

Beauty of Calderdale.
Black Douglas.
Chieftain.
Danaë.
Emperor of Brazil.
Golden Gem.
John Offin.
Mrs. John Lee.
Prima Donna.
Reine Victoria.
Rev. C. P. Peach.

Double Zonales.

Asa Gray.
Aurora.
Deuil de Strasbourg.
Gloire de Nancy.
Jewel.
L'Année Terrible.
Madame Lemoine.
Marie Crousse.
Marie Lemoine.
Sceptre Lorraine.
Scintillant.
Triomphe de Thumesnil.

GRAY SPECIAL PRIZES.

Zonales.

Emile Licau.
Miss Gertrude.
Mrs. A. Miles.
Remus.
Renown.
Warrior.

Variegated Zonales.

Achievement.
Guardsman.
Lady Dorothy Neville.
Lass o' Gowrie.
Miss Goring.
Mrs. J. Clutton.
Peter Grieve.
Plutarch.
Prince of Wales.
Sir R. Napier.
Sophia Cusack.

Specimen Zonale, not Variegated.

Harold.

Specimen Zonale, Variegated.

Florence.

The above list is given for the benefit of those who are about making up or adding to their collections, and whoever selects from it may rest assured that he will get nothing but first class varieties in every respect.

The plants exhibited were all well grown, indeed superb. The Zonales were all that could be desired, and the trusses of bloom on some of the plants were very large and fine. The Variegated Zonales from H. H. Hunnewell, were the largest plants on exhibition of that class; they were very symmetrical in shape, and showed that they had been grown by skilful hands. Those from Hovey & Co., although not as large, were good specimens and well worthy of the prize they received. Those shown by William Gray, Jr., while not as large as either of the above, were the highest colored of any we have had the pleasure of seeing; they were really gorgeous, and had no other plants been shown than those of Mr. Gray they would have been an exhibition of themselves, but Mr. Gray thinks that he will have size as well as color another year. The Bronze varieties, although not as much cultivated as the Gold and Silver, are well worthy of a place in any collection, as the fine specimens from Mr. Gray fully proved. The Double Zonales exhibited by Hovey & Co., were as fine plants and as well selected varieties as we have ever seen. The single specimens from the same gentlemen were well grown plants, and very justly received the admiration of all.

March 6th, William Gray, Jr., exhibited for the first time, flowers of the following varieties:

Albert Grevy.
Albert Victor.
Argus.
Dr. Livingston.
Louis Froebel.
M. Littre.
Mrs. E. Naish.
Mrs. Musten.
Purple Prince.
Remus.
Vanguard.

The trusses were all small, being the first flowers that have grown on the newly imported plants, but were splendid, showing a great improvement on the older varieties, both as to color and size of flower.

May 22d, James McTear exhibited *Pelargonium quinquevulnerum*, *P. triste*, and *P. ardens*, species from the Cape of Good Hope.

It is to be regretted that at the Opening Exhibition on the first

Saturday in June, there was no competition for the prizes for show and fancy Pelargoniums. It would seem from the large number that are cultivated, and the liberal premiums offered, that the stands should be well filled. In former seasons there has been a spirited competition for this prize, and we trust that there will be in the future. The only specimens exhibited were from J. B. Moore, who showed six small plants of new and fine varieties.

Spring Herbaceous Plants.—Good collections were shown by E. S. Rand, Jr. and James McTear, but no list of either collection being received we are unable to give the names of any.

Tulips.—The only exhibitor was C. M. Atkinson, who showed ten fine named flowers.

Tree Pæonies were shown by Marshall P. Wilder and Hovey & Co., from whose unrivalled collections fine varieties always come.

Hardy Shrubs.—Good collections were exhibited by James Cruickshanks, James McTear, and Miss S. W. Story. Nothing new or specially remarkable was shown, but there was a good variety, proving that the cultivation of hardy shrubs is receiving a liberal share of attention.

Rhododendrons.—On the 3d of April H. H. Hunnewell exhibited two superb specimen plants, in pots, of Prince Eugene and Rollissonii. They were about three feet high, with very fine heads and full of bloom, the trusses of flowers being very large. At the pelargonium show the same gentleman exhibited plants of three magnificent Himalayan species—*Dalhousiæ*, *formosum magnificum*, and *Sesterianum*.

On account of the lateness of the season the award of prizes for hardy rhododendrons was postponed one week, to June 12. H H. Hunnewell offered three boxes of choice varieties from his splendid collection, for the Society's prize. E. S. Rand, Jr., exhibited the following named twelve varieties, all of which are hardy, with perhaps the exception of Lady Armstrong.

Album Grandiflorum,	Grandiflorum,
Aureum,	Hannibal,
Bicolor,	Lady Armstrong,
Cœlestinum Grandiflorum,	Lee's Purple,
Everestianum,	Purpureum Grandiflorum,
Gloriosum,	Roseum Elegans.

For the Hunnewell Special Prizes, E. S. Rand, Jr., was the

only competitor, with a fine stand of named varieties. Hovey & Co. exhibited a small stand of fine flowers.

June 19th, E. S. Rand, Jr., again exhibited twenty-four varieties of choice rhododendrons. This was, indeed, a superb collection and well deserved the high encomiums it received from the large number of visitors. In addition to the twelve previously mentioned the following varieties were shown:

Album Elegans,
Candidissimum,
Daisy Rand,
Delicatissimum,
Gloriosum,
H. H. Hunnewell,
Lady Eleanor Cathcart,
Limbatum,
Onslowianum,
Purity,
Scipio.

Hardy Azaleas.—E. S. Rand, Jr., Hovey & Co., and Joseph Clark, each exhibited finely arranged stands of choice varieties. The largest number of varieties was shown by Mr. Rand, but the collections were all good. It is hoped that the very liberal premiums offered by Mr. Hunnewell for rhododendrons and azaleas, will bring out, especially for rhododendrons, a larger competition than they have the past season.

Roses.—During the earlier months of the year, we were favored with some very fine displays of roses, both of plants in pots and cut flowers. Those exhibited by James Comley, February 27th and March 13th, in pots, were the best specimens ever shown, and were a good proof of the skill of the exhibitor. The plants were in the best possible condition, the foliage rich and luxuriant, and the blooms very large. As many of them are new, we append a list of the best varieties which have not been described in our previous reports.

Abbé Bramerel.—Reddish crimson, shaded with dark velvety purple; large, full and good form.

Alfred Colomb.—Bright fiery red; large and full; one of the best.

Anna de Diesbach.—Clear rose, fine color; very large and showy.

Baroness Rothschild.—Pale, delicate rose, shaded with white; large and globular; one of the very best.

Belle Lyonnaise.—New.

Bessie Johnson.—Light blush; very large, double, and sweet; of excellent habit; a fine rose.

Centifolia Rosea.—Bright pink; large; of beautiful cupped form.

Coquette des Blanches.—Pure white; globular and large; the best white Hybrid Perpetual yet introduced.

Countess of Oxford.—Bright carmine red, shaded; very large, full, and fine form; foliage handsome.

Edouard Morren.—In the way of Jules Margottin, but of a lighter color; large and more double.

Etienne Levet.—Carmine; large, full, fine form; a seedling of Victor Verdier.

Francis Barlot.—New.

La France.—Beautiful pale peach, rose centre; very large and full; free bloomer; a good bedding and decorative rose.

Louis Van Houtte.—Reddish scarlet and amaranth, the circumference blackish crimson, shaded; very large; full, and of fine globular form.

Madame Georges Schwartz.—Fine Hortensia rose, changing to glossy rose; very large.

Madame Lefebvre Bernard.—Bright rose, tipped with white; freely produced, and very large.

Madame Scipion Cochet.—Beautiful lively rose; large and full.

Perle de Lyon.

Richard Wallace.—Bright rose, the petals slightly bordered with white; very large; full and of fine form.

Rosa Bonheur.—Pale rose; buds very fine; one of the best for forcing.

Souvenir de Général Douai.—Fine bright rose; almost full form; globular.

Mr. Comley has also at various times through the season made splendid displays of cut flowers, mostly of the varieties already described. Joseph Tailby, has shown fine buds of Climbing Devoniensis, Perle de Lyon, Marechal Niel, and Niphetos. James McTear, very fine vases of La Sylphide and Cornelia Koch. C. M. Atkinson, buds and flowers of La Sylphide and Duchess of Edinburgh. E. S. Rand, Jr., good collections of Tea Roses, fine sprays of Fortune's Double Banksia Rose, the best of the Banksias, a very interesting description of which is given in Parkman's "Book of Roses," page 153; and very fine flowers of the Cherokee Rose (*Rosa lævigata*), which is also described in the same work, page 196.

The special Rose Exhibition occurred June 28th; and, although

the queen of flowers, owing to the unfavorable season, was not up to the usual standard, the exhibition was a good one. Not only did those who are accustomed to exhibit bring in their best flowers, but we were glad to welcome several new contributors. At no time has so much enthusiasm been manifested as at this exhibition, and if we mistake not the intention of the growers, we shall witness next year a show of roses such as has never been seen in this country.

Of Hardy Perpetual Roses, the exhibitors were, President Francis Parkman, J. C. Chaffin, William Gray, Jr., J. H. Woodford, and James Comley. The names of these gentlemen, who are all well known as successful growers, are a sufficient warrant of the character of the flowers placed on exhibition.

For the Hunnewell Special Prizes, the exhibitors were J. C. Chaffin, Wm. Gray, Jr., and J. H. Woodford. The first prize for six named varieties was awarded to J. C. Chaffin; but we regret that we are unable to give the names of the varieties. William Gray, Jr., took the second prize with Mlle. Marie Rady, Paul Veron, Alfred Colomb, Dupuy-Jamain, Felix Genero, and Edouard Morren.

The first prize for the best twelve of one variety was also awarded to Mr. Gray for a stand of superb blooms of Madame Laurent, and the second prize to John C. Chaffin for Madame Victor Verdier.

For Hardy June Roses, there was no competition.

Tender Roses were shown by James Comley and E. S. Rand, Jr., each of whom exhibited some very fine flowers of the best varieties.

Moss Roses.—By far the best collections that have been shown for several seasons were placed on exhibition by A. McLaren, and others.

In the General Display, the exhibitors were Joseph Clark and J. S. Richards. The collection from Joseph Clark was very fine, filling four hundred bottles with the best varieties; the collection of Mr. Richards was very good.

Gloxinias have been exhibited by Joseph Clark, whose beautiful plants have been greatly admired by all. C. M. Atkinson also showed a very handsome single specimen plant, and Marshall P. Wilder a fine lot of seedlings, equal to any of the imported varieties. Col. Wilder has over six hundred plants which have

bloomed in less than eight months from seed. We had the pleasure of visiting his greenhouses the past season and witnessing his enthusiasm in producing new varieties of plants; indeed besides gloxinias there were many other seedling Gesneriaceous plants, while of azaleas there were hundreds. All these plants were produced from hybridized seed, and we expect to see the results of his rich experience in the exhibition of many new varieties at our hall the coming season. Mrs. A. D. Wood also exhibited some seedling gloxinias with remarkably large and well-formed flowers.

Wardian Cases.—W. H. Halliday and J. F. Mann were the exhibitors; the cases were very tastefully got up and neatly arranged with choice plants; they were fit to adorn any parlor.

Fern Cases were shown by W. H. Halliday and William Edgar; both fine specimens of neatness and good taste, and containing choice specimens of rare ferns.

Herbaceous Pæonies.—Hovey & Co. exhibited a collection of ten fine named varieties, and also Richardson's Seedlings, Nos. 1, 2, and 3, Rubra Superba, and Dorchester; the two last mentioned were very large and handsome and well deserve a place in every collection of herbaceous plants.

Sweet Williams were exhibited by James Nugent, A. McLaren, B. G. Smith and others. While they were all good, the larger part of them being of the auricula flowered class, there was nothing worthy of special note.

Summer Herbaceous Plants.—James McTear was the only exhibitor. His stand contained a very fine collection of choice varieties. Mr. McTear has always exhibited such collections, and we hope others will follow his example, and give us a little more competition in this valuable class of plants.

Delphiniums.—A good collection of named varieties was shown by A. McLaren, he being the only contributor.

Summer Phloxes.—James McTear and A. McLaren, exhibited good stands of named varieties, all distinct and fine, but not better than have been shown in previous seasons.

Summer Lilies were shown by W. K. Wood, Herbert Gleason, and J. S. Richards.

Picotees.—James Nugent exhibited ten very fine named varieties. There certainly is no choicer florist's flower than this, and we hope in future to see more of them at our exhibitions.

Fungi.—W. K. Wood and Mrs. E. M. Gill each exhibited a collection.

Balsams.—There was quite a spirited competition for the prizes offered for this beautiful annual. The best collections were those of J. B. Moore and James Comley.

Late Phloxes.—Hovey & Co. and James McTear each exhibited stands of fine named varieties, containing an excellent assortment of flowers, of distinct colors, fine form, and good heads. The stand from Hovey & Co. was especially noticeable.

Francis Parkman exhibited a fine seedling flower; large, good form, color white with deep crimson eye. James McTear exhibited a very fine seedling flower of medium size, color bright pink, deep cherry eye, and full spike. E. F. Washburn showed on the 4th of September a good seedling; pure white, light rose eye, free flowering and good habit.

Petunias.—Good collections were shown by James O'Brien, Mrs. A. D. Wood, and several other contributors.

Lilies.—James Comley exhibited two very fine pots of *Lilium lancifolium*, the largest and best we have seen. C. L. Allen, of Queens, N. Y., brought two pots of *L. longiflorum;* and Hovey & Co. *L. lancifolium* var. *Melpomene*, a splendid flower; color deep crimson, edged with white. *Lilium auratum* has been shown by various contributors; those most noticeable were a large plant grown in a tub, from Mrs. A. T. Perkins, containing one hundred and nineteen flowers and buds, though the individual flowers were small; and a single spike from Joseph Clark, having on it sixty-eight buds and flowers, the largest single spike ever exhibited. This, however, consisted of several stems merged into one, such as in *Lilium lancifolium* is known as var. *monstrosum.*

Native Ferns.—Two splendid collections were shown by J. Warren Merrill and Mrs. C. N. S. Horner, Mr. Merrill's being the best collection of native ferns ever shown. Besides cut fronds he exhibited a beautifully grown plant of *Lygodium palmatum.* Mrs. Horner's collection contained fifty species and varieties, and of that number, thirty-eight were obtained from their native haunts.

Gladioli.—The premium day was August 21st, when J. S. Richards, George Craft, H. Gleason, and James Nugent, exhibited very fine stands. The seedlings of Mr. Richards have been very noticeable, many of them almost equalling the best imported

varieties. Gladioli have been a very prominent feature at our exhibitions; the finely arranged stands of seedlings from week to week have given the hall a very brilliant appearance and attracted the notice of all. Not less inviting have been the splendid English and French varieties shown by W. H. Spooner, which for diversity of color, form, and substance have not been equalled. We give descriptions of some of the best, beginning with the new English varieties:

Astræa. — Scarlet crimson, white centre, carmine stripe.

Belgica. — Flesh color, veined with lilac.

Hesperia. — Orange scarlet, with rosy purple throat; large flower.

Lady Bridport. — Blush, flaked carmine and carmine stripe; fine flower.

Marica. — Lilac, flaked purple, yellow centre, violet stripe.

Mrs. Reynolds Hole. — White, with a lilac tinge.

Orbona. — Scarlet, flaked maroon, white centre, white line on each petal.

Una. — Scarlet, white centre, white line on each petal.

Victory. — Crimson flaked, purple centre; a fine flower.

Wonder. — Salmon red, flaked with rose, centre of each petal white, with a violet stripe; large flower.

Zalates. — Mauve, veined with rose, lower petals lilac.

Zama. — Crimson, with a large white centre.

A few of the newer and most desirable of the French varieties are next named.

Astrée. — Pure white, with distinct violet carmine blotch, throat suffused with pale lilac.

Grand Lilas. — Fine tall spike of large, perfectly arranged flowers of a beautiful delicate lilac, shaded darker towards the edges; a striking flower and vigorous growing plant.

Richard Cœur de Lion. — Fine spike of large flowers of a bright crimson red, flamed with garnet; lower petals spotted and blotched golden yellow; a flower of great substance and an uncommonly strong growing plant.

Themis. — Fine spike of delicate rose colored flowers, flushed with carmine, cream colored blotch; very beautiful and attractive.

From J. F. C. Hyde came a very fine seedling; flower white, of good substance and fine form; one of the best whites ever shown. From A. McLaren, three seedlings, one of which is worthy of

note, the flower being of a fine cherry color, with creamy yellow throat, the ends of the petals striped with carmine. On the 28th of August, J. S. Richards brought six seedlings selected from his large variety; we did not take any note of these further than that they were fine flowers. From Joseph C. Lowell, of West Boylston, came a collection of seedlings, which were all good, but not better than have been shown previously. We are glad to see that so much attention is being given to the cultivation of this valuable bulbous plant.

Asters. — The best display was on the 28th of August, which was premium day. The exhibitors were C. M. Atkinson, Hovey & Co., J. F. Rogers, Joseph Clark, John Parker, and James O'Brien. The collections comprised about twelve varieties of selfs and striped, which were very beautiful, the flowers being the largest that have been exhibited.

Verbenas. — The show of verbenas was better than usual. September 4th being prize day, good collections were brought in by J. B. Moore, Hovey & Co., Sarah W. Story, A. McLaren, and James O'Brien.

Native Plants. — This interesting department has been well represented, and has been of great interest to all lovers of our beautiful plants and flowers. Mrs. C. N. S. Horner and E. H. Hitchings have been indefatigable in their labors to procure the choicest kinds; their collections have always been fully appreciated, and have been centres of interest and instruction to the large number of visitors. Mr. Hitchings' collections are always made with great care, embracing only the choicest of our native plants; among them the following are worthy of mention:

Aletris farinosa (Star Grass). — See "Bigelow's Medical Botany," vol. III, pl. 50.

Drosera rotundifolia (Round Leaved Sundew).—These specimens were very large and fine.

Eupatorium — four species, *E. perfoliatum* (Thoroughwort), *E. pubescens* (Hairy Eupatorium), *E. purpureum* (Trumpet Weed), and *E. teucrifolium*.

Habenaria blephariglottis (Fringed White Orchis). — A very delicate and beautiful species, and quite rare.

Lilium superbum. — One of the most magnificent of our native plants. Stem erect, straight, from three to six feet high, bearing a large pyramid of orange colored flowers, not unfrequently thirty or forty in number; rare. (Florula Bostoniensis.)

Sabbatia chloroides. — One of our handsomest native plants.

Utricularia cornuta (Horned Bladderwort). — Found in wet ground.

In the collection of Mrs. Horner, the following are worthy of special mention:

Asclepias purpurascens (Dark Flowered Silk Weed).
" *tuberosa* (Butterfly Weed).
Calla palustris (Northern Calla).
Cypripedium acaule.
Leucanthemum tubuliflorum.
Lythrum Salicaria (Spiked Loosestrife.)
Magnolia glauca (Small Magnolia).
Potentilla tridentata (Mountain Potentilla).
Vaccinum Vitis-Idœa (Cow Berry).

In the collection of July 10th, were the following plants, particularlarly injurious in cultivated or grazing lands, only one of which is indigenous in this vicinity, though all are found growing wild:

Cirsium arvense (Canada Thistle).
Daucus Carota (Wild Carrot).
Erigeron strigosum (Hairy Erigeron).
Genista tinctoria (Dyer's Weed).
Hypericum perforatum (Common St. John's Wort).
Leucanthemum vulgare (White Weed).
Linaria vulgaris (Toad Flax).
Polygonum Persicaria (Spotted Polygonum).
Ranunculus acris (Fall Crowfoot).
Raphanus Raphanistrum (Wild Radish).
Rudbeckia hirta.
Rumex Acetosella (Sheep's Sorrel).

In addition to the above, on the 6th of April, Mrs. Horner showed a very fine collection of Cryptogamic and other native plants.

April 2d, we had from George E. Davenport *Trillium grandiflorum* and *Hepatica triloba*, grown in a window; also *Cypripedium parviflorum;* and November 6th, *Botrychium ternatum*, from California, the typical form of the species, and a good specimen of *Darlingtonia Californica;* and at different times through the season several small collections of choice native plants and flowers.

From Minot Pratt, *Betula papyracea* var. *minor*, found in Concord, Mass.

April 17th, John Robinson exhibited the following named collection, several of which had been forced in the house:

Alnus serrulata.
Cassandra calyculata.
Ceratophyllum demersum.
Comptonia asplenifolia.
Draba verna.
Kalmia latifolia.
Laurus Benzoin.
Salix (two species).
Trillium grandiflorum (in bud).
Ulmus Americana.
Utricularia, sp.
Aspidium spinulosum.
" *acrostichoides.*
" *marginale.*
Polypodium vulgare.

August 28th, Mr. Robinson brought *Pinus resinosa* (Red Pine), and September 4th, *Albies nigra* (Black Spruce), both from natural groves in Essex County and scarce in this region.

Double Zinnias, — the best that have been shown for several seasons, were on exhibition September 11th. The flowers were all large, and in a very fine variety of color. George Craft, C. M. Atkinson, J. B. Moore, Hovey & Co., and George N. Noyes, were the exhibitors.

Cut Flowers. — For the best collections of fifty named varieties of Greenhouse Flowers, James Comley, Hovey & Co., C. M. Atkinson, and James McTear have been the competitors, and for the fifty named varieties of annuals and perennials, C. M. Atkinson, James O'Brien, and James McTear. The competition for these premiums has not met the expectation of the Committee. The reason assigned by some is that the prize is not liberal enough for the amount of labor required to put up and name correctly fifty varieties of flowers. We hope that in the future there may be a good competition, for certainly collections of fifty named varieties of flowers, exhibited at our weekly shows, cannot fail of being very instructive as well as interesting to those who wish to become familiar with the names of plants and flowers.

Cut Flowers (150 bottles). At nearly all of the weekly exhibitions the general displays of cut flowers, although as a whole not equal to some seasons, have nevertheless been an attractive feature. James Comley, W. K. Wood, and James O'Brien, have been the most constant contributors to this department, James McTear, J. S. Richards, and A. McLaren having sent occasional contributions. It is due to Mr. Comley to make especial mention of the handsome stands filled by him; they have always been arranged with the choicest flowers and in the neatest manner —

indeed, no better displays of cut flowers have ever been made. We have also been glad to welcome to this department W. K. Wood, who has been the second largest contributor, and has labored untiringly to do his part well. The names of the other contributors, who are well known to you all, are a sufficient guarantee of the quality of their productions.

At the annual exhibition, the display, although good, was not up to its usual standard, a hard frost and some very cold nights previous to the time of the exhibition, having destroyed the flowers in many places.

Greenhouse Plants. — March 13th, Hovey & Co. exhibited the six following named varieties in bloom : *Phaius grandifolius*, Azalea Princess Mary of Cambridge, *Franciscea calycina*, *F. confertifolia*, *Imatophyllum miniatum*, and *Ixora coccinea*. June 28th, two good collections were exhibited by William Gray, Jr., and James Comley, each containing well-grown, handsome plants, of fine species and varieties. While those from Mr. Gray were the largest plants, in Mr. Comley's collection were many new and rare varieties.

At the Annual Exhibition, Edward Butler and Hovey & Co., exhibited very fine collections. The plants were all well grown, clean, and handsome, and gave good evidence that they had been cared for by skilful hands. Mr. Butler's collection contained the following fine specimens :

Alocasia zebrina.
Beaucarnea recurvata.
Croton elegans.
" *Veitchii.*
Cycas revoluta.
Dracœna cannæfolia.
Dracœna ferrea.
" *stricta.*
Eurya latifolia variegata.
Maranta princeps.
Pandanus graminifolius.
Strelitzia augusta.

The Committee were unanimous in their opinion that the twelve plants just named were as good a collection in every respect as has ever been exhibited.

Hovey & Co. have always contributed the choicest plants from their extensive collection ; the plants shown by them were fine specimens of

Agave medio-picta.
Chamærops excelsa.
Croton interruptum.
" *longifolium.*
Cycas revoluta.
Dion edule.
Dracœna Draco.
Maranta zebrina.
Phormium tenax Veitchii var.
Richardia pacifica.
Yucca quadricolor.

Stove and Greenhouse Flowering Plants. — The only competitor was E. S. Rand, Jr., who exhibited on the 28th of June the following varieties of well grown plants: *Brassia verrucosa*, *Cattleya Amethystina*, *Dendrobium Devonianum*, *Aerides Lobbii*, *Lælia purpurata*, and *Gesnera tubiflora*.

Specimen Plants. — June 28th, James Comley exhibited a superb specimen of *Dracæna Shepherdii*, which is one of the finest in cultivation.

At the Annual Exhibition, Edward Butler exhibited a magnificent specimen plant of *Cycas circinalis*, a native of the East Indies, and one of the finest of the genus, attaining a height of from ten to twelve feet. The plant shown was furnished with a noble head of fronds, of a dark shining green above and of a paler color beneath.

From Hovey & Co., came a beautiful specimen of *Cocos Weddelliana*, the most elegant species of this genus. When not more than four feet in height, young plants of it have often from twelve to twenty graceful fronds, forming a plume of the most beautiful description.

Specimen Flowering Plants. — Edward S. Rand, Jr., exhibited a very pretty plant of *Tapeinotes Caroliniæ*, which was fully described in the Transactions for 1874, Part II, p. 103.

Variegated Leaved Plants were shown by James Comley and Hovey & Co., and, although not large, were very fine, distinct specimens. The varieties from Mr. Comley were the following:

Croton Weismanni. — "One of our most distinct and best introductions of late years. It is a plant of very striking character, and the better to convey a correct idea of its beauty, we transcribe the report given in the *Gardeners' Chronicle*, of 1868, p. 659, when this splendid plant was first exhibited: —

'Foremost amongst new ornamental foliaged plants was *Croton Weismanni*, from Messrs. Veitch; a glorious species, with a habit something like that of a *Dracæna*, and long narrow leaves, striped and mottled with gold of the brightest possible hue. This is indeed an acquisition.'

The plant is of very graceful habit, and of free growth. The leaves attain a length of from ten to twelve inches, and a width of three-quarters of an inch. They are very acute at the apex, the upper surface dark shining green, with gold blotches, the midrib

and margins golden yellow, under surface similar, but paler green."

Croton interruptum. — Foliage bronzy green, centre rib scarlet, shading to a rich golden hue, pendant and gracefully undulated; a superb plant.

Pandanus Veitchii.—"This magnificent Pandanus was discovered by the late Mr. J. G. Veitch during his journey through the South Sea Islands, from whence he brought so many beautiful and interesting plants. The leaves are slightly serrated, of a light green color, beautifully striped with broad bands and lines of pure white. They average two feet in length by three inches in width, growing erect from the stem, but towards the end gracefully curving, thus giving the plant a most elegant appearance, and showing itself to be perfectly distinct in habit as well as in coloring."

Maranta Makoyana. — Foliage of a dark green, with traverse markings of a sparkling, golden, transparent coloring. One of the best *Marantas* ever exhibited.

Dracœna Mooreana. — Foliage glossy bronze, footstalk and midrib bright crimson; one of the very best.

Dracœna Shepherdii.

From Hovey & Co., *Phormium atropurpureum* (new).

Dracœna Hendersoni.

Pandanus Veitchii,—described in the first named collection.

Phormium tenax variegatum. — A highly ornamental plant; the leaves three feet long and two inches wide, of a light, glaucous green, with broad, clear white stripes throughout the entire length.

Dracœna amabilis.

Croton Weismanni,—also described in the first named collection.

Specimen Variegated Leaved Plant. — Hovey & Co. exhibited a small plant of *Ficus Parcellii* (new), and James Comley, *Abutilon Sellowianum marmoratum.*

Caladiums were shown by Hovey & Co. and James Comley; the plants were not large, but well grown. Some of the varieties are very showy, and are among the best of our fine foliaged ornamental plants. Those shown were fine and distinct, and among the best that have ever been on exhibition.

Ferns were exhibited by J. W. Merrill, James Comley, George Higginson, and Edward Butler. The collection of Mr. Merrill contained the following named splendid varieties:

Asplenium lucidum.—A native of New Zealand; a fine, large, free growing fern, of a beautiful pendulous habit; fronds of a shining green.

Asplenium marinum.

Cibotium Barometz.—A splendid evergreen species; a native of China.

Cibotium Schiedei.—A beautiful evergreen species from Mexico; an elegant fern.

Davallia Mooreana.—One of the most noble species in cultivation, producing gracefully curved fronds of a delicate pale green color; the large fronds are elegantly cut into numerous small, blunt segments, and are remarkable for the prominence with which the sori show in a dotted manner on the upper surface.

Diplazium Zeylanicum.—A distinct and handsome fern; an evergreen stove species from Ceylon.

Doryopteris nobilis.—As its name indicates it is a noble species, and a very desirable plant; a native of Brazil.

Gymnogramme Japonica.
" *Peruviana.*
" *spectabilis.*
" *trifoliata.*

Lonchitis pubescens.

Lygodium dichotomum.
" *scandens.*

Nephrolepis davallioides.—A splendid fern; the most beautiful species of the genus, and one that should be in every collection. The graceful habit of its growth, and the handsome appearance of its fronds render it a species of no ordinary merit.

Polypodium cambricum.
" *cuspidatum.*
" *muscæfolium.*

Filmy Ferns.—A writer in the Gardeners' Magazine goes into raptures over these beautiful ferns, and we can hardly say that his descriptions are exaggerated. We give three of them, as follows:

" *Todea superba.*—It is without a question the finest filmy fern in cultivation, surpassing alike the powers of pen or pencil to do justice to its sumptuous beauty. The fern-grower who has not seen it is clearly shut out of the very world it is his (or her) hope to win. With such a gorgeous plant before me, I feel it prudent to rest awhile, lest I should weary the reader with a superabundance of the adjectives of eulogy.

Trichomanes anceps.—A splendid species with large triangular fronds, which are divided into feathery pinnæ with linear and

angular segments. The color is deep green, and the texture smooth and rigid.

Trichomanes radicans.—A well-known British fern, admirably adapted for a close case. It is extremely rich and leafy, with large deltoid fronds, which, when grown vigorously, acquire a somewhat crispy appearance. It must be grown in a constantly humid atmosphere, but the temperature of a cool fern house is sufficient for it. As the barren fronds live eight or even ten years, and the fertile fronds three or four years, a large dense specimen, with not a shrivelled frond upon it, carries in its appearance evidence of good cultivation."

These three species were exhibited by Mr. Merrill.

James Comley exhibited the following named varieties:

Adiantum amabile.—A very graceful and beautiful species from Peru.

Adiantum cuneatum.—The commonest of all the *Adiantums*, and one of the most useful.

Adiantum Farleyense.—Already well known as one of the handsomest ferns for decorative purposes.

Adiantum Sanctæ Catherinæ.—A fine exhibition plant.

Adiantum scutum.

Adiantum tenerum.—A strong growing species, which, when well cultivated, forms fine specimen plants.

Adiantum trapeziforme.—A noble fern from the West Indies, a splendid exhibition plant.

Cibotium princeps.

Pteris argyræa.—A handsome ornamental species from the East Indies.

Pteris cretica albo-lineata.—A handsome evergreen fern from Japan.

Pteris tricolor.—A well-known beautiful variegated species from the East Indies.

From George Higginson we had *Pteris argyræa*, *P. tricolor*, *P. cretica albo-lineata*, *Adiantum trapeziforme*, *A. macrophyllum*, a very handsome distinct species from the West Indies; and *Lygodium Japonicum*, a very pretty climbing fern from Japan.

From Edward Butler, *Adiantum cuneatum*, *A. trapeziforme*, *Lygodium microphyllum*, *Dicksonia squarrosa*, an elegant fern, deserving a place in every collection—a native of New Zealand; *Pteris umbrosa*, a fine ornamental plant, of a vivid green—a native of Australia; and *Davallia lonchitidea*.

From William Edgar the following fine plants of British Ferns:

Athyrium corymbiferum.	*Athyrium Pritchardii.*
" *Craigii.*	" *tortile.*
" *Frizelliæ.*	" *Victoriæ.*
" *pinnatum multifidum.*	*Lastrea cristata.*
" *plumosum.*	

Tree Ferns.—A very handsome pair, consisting of *Dicksonia antarctica* and *Alsophila australis*, were exhibited by J. Warren Merrill. The former is a magnificent fern from Australia, and in its native country attains a height of thirty feet or more, and bears at its summit a magnificent crown of dark green, lance-shaped fronds, from six to twenty feet long, beautifully arched, and becoming pendulous with age. The crown itself is frequently ten or twelve feet across, and is evergreen.

The *Alsophila australis* is also a magnificent fern, and one of the finest of the genus, rising on a stem twenty-five to thirty feet high, the fronds being from five to ten feet in length; it is a native of South Australia.

James Comley also sent a good plant of *Alsophila australis.*

Dracænas.—The splendid specimens shown by H. H. Hunnewell and James Comley, are worthy of more than a mere mention that such plants were on exhibition, there being few, if any plants shown, that surpassed them for beauty and usefulness. They are invaluable for the decoration of indoor apartments, the conservatory, or garden, their habit being peculiarly elegant, combined with rich coloured leafage. The plants exhibited were not bare stems with a few leaves on the top, but were splendid specimens, well furnished with luxuriant foliage. The varieties shown by Mr. Hunnewell were *Mooreana*, *magnifica*, *amabilis*, *porphyrophylla*, *regina*, and *Youngii.*

Palms.—The only pair on exhibition were from Hovey & Co., who showed very good specimens of *Geonoma pumila* and *Pritchardia* sp.; the former a desirable species, and highly recommended for dinner table decoration; a native of tropical America. *Pritchardia* is a small genus of palms, which are very ornamental.

Agaves.—Of late years considerable attention has been paid to this class of plants, so useful and ornamental, whether for the garden, conservatory, or hall. Two very fine collections were

shown by E. S. Rand, Jr., and Hovey & Co. The following named varieties were from Mr. Rand:

Agave Americana medio-picta.
" " *Mexicana.*
" " *Milleri.*
" " *stricta.*
" " *variegata.*
" *applanata.*
" *coccinea.*
Agave filifera.
" *micracantha.*
" *Mexicana.*
" *Sisalana.*
" *univittata.*
" *Verschaffeltii.*
" *xylinacantha.*

From Hovey & Co., *Agave Americana medio-picta*, *A. coccinea*, *A. dealbata*, *A. Ghiesbreghtii*, *A. Xalapensis*, and *A. xylinacantha.*

Cacti.—This interesting family of plants has of late received considerable attention, being not only an interesting family, but valuable for cultivation in rooms, not requiring so much care as many other plants. Two excellent collections, selected with great care, were exhibited, one by John C. Hovey, who showed the following named varieties:

Cereus Chiloensis.
" *marginatus.*
" *martini.*
" *viridiflorus.*
Echinocactus Monvillii.
Echinopsis Eyresii.
" *turbinata.*
" *Zuccariniana.*
Mamillaria applanata.
" *auriceps.*
" *depressa.*
" *elegans.*
" *gracilis.*
Mamillaria magnimmama.
" *Nebraskaensis.*
" *nivea longispina.*
" *pusilla.*
" *quadrispina.*
" *spinosissima.*
Opuntia Californica.
" *crassa.*
" *cylindrica cristata.*
" *ferox.*
" *microdasys.*
" *pes corvi.*

The plants were all neatly labelled, and were an exceedingly interesting collection. Hovey & Co. also exhibited a good collection, but as no list was handed the committee the names are unavoidably omitted.

Succulents (other than Agaves and Cacti), were exhibited by John C. Hovey, and Hovey & Co. Those from J. C. Hovey were selected with great care, and contained the following species and varieties:

Aloe colubrina.
" *ferox.*
" *grandidentata.*
" *mitræformis.*
" *obscura.*
" *saponaria.*
" *variegata.*
Cotyledon orbiculare.
Echeveria agavoides.
" *farinosa.*
" *latifolia compacta.*
" *metallica.*
" *scaphylla.*
Gasteria brachyphylla.
Greenovia fallax.
Haworthia fasciata.
" *pumila.*
" *radula.*
" *retusa.*
Hechtea regalis.
Mesembryanthemum felinum.
Sempervivum arboreum variegatum.
" *Canariense.*
" *urbicum compactum.*
Yucca quadricolor.

For many years most of the beautiful plants of this class have been in obscurity, and as fashion has its changes in almost everything, so it has in plants; and now we find many of the succulents among the most popular and useful plants for bedding purposes, and for decorating the conservatory, greenhouse, or window. This collection was the best that has been exhibited. Hovey & Co. also exhibited a choice collection, neatly labelled.

Best New Pot Plant. — H. H. Hunnewell, exhibited a splendid specimen of *Dracæna Baptistii*, which is one of the best new pot plants ever shown.

Hanging Baskets were shown by James McTear, John Vose, and Walsh Brothers, all well filled with good plants.

Dahlias have been exhibited by Macy Randall, S. G. Stone, Hovey & Co., and George Everett. Each of these collections contained many beautiful flowers, which for brilliancy and variety of color could hardly be excelled. When we are able to procure such fine varieties, the dahlia merits a situation in every garden.

Bouquets. — Hovey & Co., James Comley, James McTear, James O'Brien, James Nugent, Mrs. S. Joyce, and Mrs. E. M. Gill, have been the contributors, and the mention of these names is a sufficient assurance of the merit of the productions. The hand bouquets have been particularly noticeable; at no time have there been shown any other than first class bouquets—indeed it has more than once been very difficult to decide whose was best.

Baskets of Flowers have been exhibited by Mrs. A. D. Wood, Mrs. S. Joyce, Mrs. E. M. Gill, and Miss S. W. Story.

As in past seasons, the productions of these ladies have been highly appreciated by the large number of visitors.

Table Designs. — Very neatly arranged and pretty designs have been shown at most of the exhibitions through the season. While we are not able to note any marked improvement in this department, it is only justice to the contributors who have done their work so faithfully, to say that their efforts have been highly appreciated by all. Mrs. A. D. Wood, Mrs. S. Joyce, Mrs. E. M. Gill, and James O'Brien have been the chief contributors.

Evergreen Trees and Shrubs. — A very fine collection of twenty varieties of choice Japanese evergreens, many of them new and rare, was shown by William Gray, Jr., on the 13th of March, the following being particularly noticeable:

Pinus Massoniana var.
Retinispora ericoides.
" " *var.*
" *filiformis pend. fol. var.*
Retinispora leptoclada.
" *lycopodioides.*
Retinispora obtusa aurea.
" *pisifera.*
" *plumosa aurea.*
" *squarrosa.*
Sciadopitys verticillata.
Thuja pendula.
Thujopsis dolabrata var.

Chrysanthemums. — Plants in pots were shown by George Higginson, James Comley, and Marshall P. Wilder. Those from Mr. Higginson were very handsome specimens, well flowered and furnished with vigorous foliage. The handsome standards from the same gentleman were especially worthy of notice. The stems were four feet high with very finely shaped heads. The Pompon varieties were Cedo Nulli, Damietta, General Canrobert, Bob, Rosabella, Niobe. Large flowering varieties, — Duke of Edinburgh, Dr. Sharp, Rifleman, Novelty, Jardin des Plantes, Empress of India.

Marshall P. Wilder exhibited a plant of George Peabody, a white variety, showing, what is rare in the Chrysanthemum, a curious sport, some of the flowers being entirely yellow.

Of New and Rare Plants James Comley has exhibited

Abutilon Sellowianum marmoratum.
Alocasia illustris.
Anthurium crystallinum.
Asplenium longissimum.
Bonapartea Landenii.
Dioscorea illustrata.
Doryanthes Palmeri.
Draccena amabilis.
" *Baptistii.*

Dracæna Hendersoni.
" *Shepherdii.*
Echeveria Abyssinica.
Ficus Parcellii.
Maranta Seemanni.
Pandanus Veitchii.
Poinsettia pulcherrima rosea-carminata.

And the new *Lobelia pumila grandiflora flore pleno;* flowers large and very double, of a beautiful light blue color; a fine acquisition. Also, Pelargonium Queen Victoria, a very attractive variety, with large flowers, the color being very rich; the petals are a brilliant carmine, beautifully fringed, with a sharply defined pure white margin. For decorative purposes it will undoubtedly prove very valuable.

From Hovey & Co. came the new variegated Pelargonium Happy Thought; the plant was small, but the variety is highly spoken of in the journals and catalogues; *Anthurium crystallinum*, spoken of as a perfect gem; *Ficus Bonneti*, a very fine plant for subtropical gardening; *Paullinia thalictrifolia*, and *Dahlia viridiflora* (Green flowered).

From James McTear, Pelargoniums Striata and Distinction.

From W. H. Spooner, *Cineraria hybrida flore pleno.*

From Waldo O. Ross, *Mammillaria Neumanniana*, *M. stella aurata*, *Echinopsis Eyresii*, and *Stapelia picta.*

From John C. Hovey, *Sempervivum tomentosum*, *S. arenarium*, and *S. Amaliæ.*

From Denys Zirngiebel, Daisy Queen Victoria.

From William Gray, Jr., a very fine specimen plant of *Cypripedium insigne*, with fifty flowers and buds; the best grown plant of the kind ever exhibited here.

Miscellaneous Plants have been shown by James Comley at various times through the season, as follows: *Eriostemon myoporoides* and *E. intermedius* — beautiful greenhouse evergreen shrubs from New Holland; *Epacris vestita carnea*, very handsome; *Scutellaria carnea; Rhododendron Veitchianum*, a magnificent species from Moulmain; *Anthurium Scherzerianum; Hydrangea Otaksa; Clematis mutabilis grandiflora*, a single flower, very large, measuring ten inches across; Fuchsia Oracle; *Sempervivum Californicum*, grown in a pan. The beautiful tuberous rooted Begonias, which for several years past have attracted so much attention in Europe, have just began to receive notice here, and on several occasions Mr. Comley has exhibited some very hand-

some plants. The flowers are very bright, all shades of scarlet, from yellow to carmine, and from pink to crimson. The plants are said by the English journals to be very easy of cultivation, the treatment recommended being that they should be allowed to dry off, have the soil shaken from the roots, and then be put away to winter like dahlias. In "The Garden" for 1874, it is said that Messrs. Veitch & Sons have many fine varieties planted out on their rockery, a position in which they grow vigorously; one plant has stood out for the last three winters, and is now a great mass a yard through and about two feet high, and as it bears a profusion of bright scarlet flowers it is a very attractive object. We hardly think they would stand the severity of our winters, but Mr. W. H. Spooner informed us that he had planted some dry bulbs out in a bed with other plants, with very satisfactory results. We hope to see more of these beautiful plants at our exhibitions another season.

At the Annual Exhibition Mr. Comley showed a very fine collection of plants, consisting of choice specimens of *Draccenas*, *Crotons*, *Marantas*, *Aralia Veitchii*, *Coprosma Baueriana variegata*, *Hibiscus Cooperi*, *Sambucus aureo-variegata*, *Pavetta Borbonica*, Ferns, Tree Ferns and *Caladiums*. November 20th he exhibited *Cupania filicifolia*, a handsome stove evergreen tree.

From J. H. Woodford we had Amaryllis Gracious Maid (very fine) and a superb lot from the Mauritius, which were mostly varieties of *A. vittata;* the flowers were very large and fine; also a very fine plant of *Trichinium Manglesii*.

Edward S. Rand, Jr., has shown from his choice collection, *Gelsemium nitidum* (Southern Jasmine), *Tacsonia Van Volxemi*, *Thunbergia laurifolia*, Canna Anatole Levallois, a very fine new dwarf variety; *Nymphæa cærulea*, the beautiful blue water lily from Egypt, and at the Annual Exhibition *Nymphæa Devoniensis*. Also, a fine collection of *Agaves* and other choice greenhouse plants.

Francis Parkman sent *Aquilegia olympica*, *A. leptoceras hybrida*, *A. glandulosa jucunda*, *A. cærulea*, *A. caryophlloides*, and *A. chrysantha*. The Aquilegia is among the best of our herbaceous plants, and this was the best collection ever exhibited. Mr. Parkman also sent *Anthericum liliago*, *Diervilla multiflora*, a desirable plant; *Hemerocallis Thunbergiana*, one of an ornamental genus of easy culture; *Muscari comosum*, *Spiræa palmata*, new and very fine;

Thalictrum aquilegifolium, a handsome ornamental plant for a border or shrubbery; *Viburnum plicatum*, a very fine species; *Weigelia hortensis nivea; Xerophyllum asphodeloides*, very handsome when in flower; also the following superb Clematis: Alexandra, J. G. Veitch, Miss Bateman, Prince of Wales, Star of India, Thomas Moore, *Tunbridgensis*, *Rubella*, and *Viticella rubra;* also a hybrid *Lilium*, a cross between *L. auratum* and *L. lancifolium*, a very fine, handsome colored flower, extra large and good. The herbaceous flowers shown by Mr. Parkman have always been very fine, and have added much to the interest of the exhibitions. We hope many more will take up the cultivation of this highly useful and too much neglected class of plants.

From John B. Moore we had *Lachenalia luteola*, a very fine plant with forty-five spikes of flower.

From H. H. Hunnewell, *Tacsonia ignea*, *Clematis indivisa*, a magnificent cool greenhouse climber, and Clematis Lord Londesboro, grown in a pot; this was the best specimen Clematis ever shown in a pot, and contained hundreds of bright flowers; it was an object of great beauty.

October 16th, Mr. Hunnewell, sent two flower spikes of *Agave Americana*. The plant which produced them was much injured by frost in the fall of 1874, and was thrown aside as of no value, but when it was found to show a disposition to flower, attention was given it which resulted in producing these two spikes. Though not as large as they would have been on a more vigorous plant, or as if there had been but one on this, the fact that they were the first of this species ever exhibited here, combined with the interest felt in it from the popular idea that it flowers only when a century old, attracted a large number of visitors to the Hall. Mr. Harris, Mr. Hunnewell's gardener, is of the opinion that any plant, by subjecting it to a degree of frost sufficient to check its growth without injuring the foliage, and then placing in strong bottom heat, could be forced to develop a flower spike.

From C. M. Atkinson, *Amaryllis princeps*, *Begonia glaucophylla scandens*, *Bletia Tankervilleæ*, *Chorizema Lawrenciana*, *Crassula corymbulosa*, *Erica arborea*, *E. rubra calyx*, *Franciscea calycina major*, *Kennedya monophylla*, and *Tacsonia princeps*. The plants shown by Mr. Atkinson are always in excellent condition, and give the best evidence that they have been trained by skilful hands. Those exhibited the past season have been objects fit to adorn any conservatory or exhibition table.

From William Edgar, gardener to William Claflin, a very fine specimen plant of *Statice Holfordii*, with twenty spikes of flowers, the best specimen ever shown; Fuchsia Sunray, one of the most beautiful varieties ever introduced; *Allamanda neriifolia*, a very handsome, free flowering plant.

From Joseph Clark, *Bougainvillea* sp., *Amaryllis Graviana*, *A. crocea grandiflora*, Clematis Lucie Lemoine and Gem, and a superb specimen of *Eucharis Amazonica*, with eighteen spikes of flowers and an average of seven flowers on a spike; the plant was well grown, the foliage superb, and it was the best specimen ever exhibited.

From James O'Brien, Neapolitan and Marie Louise violets.

From Francis Putnam, seedling *Amaryllis*, mostly varieties of *vittata*, some of the flowers being very fine.

From F. W. Andrews, good plants of tuberous rooted Begonias, and at the Annual Exhibition a collection of greenhouse plants, which, although small, were in good condition and will make fine specimens.

From Daniel Duffy, seventeen pots of *Amaryllis Belladonna*, which were very finely flowered.

From A. McLaren, *Campanula Medium calycanthema azurea*, and *C. Medium calycanthema alba*.

From A. P. Calder and J. C. Chaffin, very fine trusses of bloom of *Hydrangea paniculata grandiflora*, the best hardy shrub of recent introduction.

From Robert Manning, fruit of *Actæa spicata* var. *rubra*, and *Celastrus scandens*, both cultivated.

From W. C. Strong, at the Annual Exhibition, a collection of Hardy Foliage Plants of the following named varieties:

Alder, Cut Leaved.
Althæa variegata.
Amygdalus purpurea.
Ash, Aucuba Leaved.
Ash, Golden.
Arbor Vitæ, globosa.
" " Golden.
" " New Golden.
" " *Hoveyi.*
" " *occidentalis variegata.*
" " Siberian.
" " Tom Thumb.
Berberis purpurea.
Birch, Cut Leaved.
" New Purple.
Elder, Golden.
Fagus laciniata.
Forsythia viridissima.
Lonicera aurea reticulata.
Maple, Macafalie's.
Retinispora pisifera aurea.
Spiræa aurea.
" *Thunbergii.*
" *Ulmaria picta.*
Tamarix Gallica.
Weigelia nana variegata.

From James McTear, *Kalosanthes coccinea*, one of a very handsome genus of succulent plants; the flowers are very beautiful, and it should be extensively cultivated; also a very fine pan of *Nertera depressa*, the beautiful Bead Plant of Australia.

From Jackson Dawson, *Desmodium pendulæflorum*, a very handsome drooping papilionaceous flower.

From J. Warren Merrill, *Rochea falcata*, a very handsome greenhouse evergreen succulent, from the Cape of Good Hope.

From Walsh Brothers, at the Annual Exhibition, a good collection of greenhouse and stove plants; among them were specimens of *Alocasia macrorhiza*, *Hibiscus Cooperi*, *Dracænas*, *Marantas*, *Caladiums*, *Crotons*, Ferns, etc.; also good hanging baskets filled with choice plants.

From Hovey & Co., a very fine specimen plant of *Epiphyllum punctatum violaceum*.

In closing our report we would call the attention of exhibitors to the changes in the Schedule for the coming year, and would also urge upon them the necessity of handing to the Committee lists of their contributions, it being impossible to make a detailed report of the exhibitions without such lists.

All of which is respectfully submitted in behalf of the Committee.

JOHN G. BARKER, Chairman.

PRIZES AND GRATUITIES AWARDED FOR PLANTS AND FLOWERS.

January 2.

Gratuities:—

To John B. Moore, for Cut Flowers,	$1 00
James Comley, " " "	1 00
Mrs. S. Joyce, for Dish of Flowers,	1 00

January 9.

Gratuities:—

To James Comley, for Bouquet,	2 00
James Cartwright, for *Lycaste Skinneri*,	2 00
E. S. Rand, Jr., for *Phalœnopsis amabilis*,	3 00
Mrs. E. M. Gill, for Basket of Flowers,	2 00
Mrs. S. Joyce, for Dish of Flowers,	2 00

January 16.

Gratuities:—

To Mrs. E. M. Gill, for Dish of Flowers,	1 00
Mrs. S. Joyce, " " "	2 00
Mrs. A. D. Wood, for Design,	2 00
James Comley, for Cut Flowers,	2 00
John B. Moore, " " "	1 00
Miss Sarah W. Story, for Cut Flowers,	1 00

January 23.

Gratuities:—

To James Comley, for Azaleas,	5 00
Mrs. E. M. Gill, for Cut Flowers,	1 00
John B. Moore, for Plants in pots,	3 00
Mrs. S. Joyce, for Dish of Flowers,	2 00
Mrs. A. D. Wood, for Table Design,	2 00

JANUARY 30.

Gratuities:—

To Edward S. Rand, Jr., for *Cœlogyne cristata*,	$3 00
John B. Moore, for Azaleas,	2 00
Mrs. S. Joyce, for Dish of Flowers,	2 00
Mrs. E. M. Gill, for " "	2 00
Miss S. W. Story, for Vase of Flowers,	2 00
James O'Brien, for Cyclamens,	3 00
James Comley, for Cut Flowers,	2 00
" " for *Eupatorium riparium*,	2 00

FEBRUARY 6.

Gratuities:—

To John B. Moore, for Azaleas (cut flowers),	2 00
James Comley, for Cut Flowers,	2 00
" " " Plants in pots,	3 00
Mrs. C. N. S. Horner, for Native Plants,	3 00
Miss S. W. Story, for *Sarracenia flava*,	1 00
" " " " Vase of Flowers,	2 00
Mrs. S. Joyce, for Basket of Flowers,	2 00
Mrs. E. M. Gill, for " "	2 00
Mrs. A. D. Wood, for Table Design,	3 00

FEBRUARY 13.

CYCLAMENS.—For the best six, in pots, to James O'Brien,	6 00
For the second best, to C. B. Gardiner,	5 00
TABLE DESIGN.—For the best, other than a Basket of Flowers, to Mrs. S. Joyce,	5 00
For the second best, to Mrs. A. D. Wood,	4 00

Gratuities:—

To James Comley, for Cut Flowers,	3 00
" " " Plants in pots,	3 00
Mrs. E. M. Gill, for Cut Flowers,	2 00
J. B. Moore, " " "	1 00
J. H. Woodford, " " "	2 00
Mrs. S. Joyce, for Amaryllis,	1 00
Norton Brothers, for Roses,	1 00
James O'Brien, for Cyclamens,	5 00
" " " Violets,	1 00

FEBRUARY 20.

Gratuities:—

To Marshall P. Wilder, for Camellias,	$1 00
Hovey & Co., for Camellias,	2 00
William Gray, Jr., for Azaleas,	10 00
Norton Brothers, for Roses,	1 00
" " " Forced Lilacs,	3 00
James O'Brien, for Cyclamens,	2 00
J. B. Moore, for Plants in pots,	5 00
James Comley, for Cut Flowers,	3 00
Mrs. E. M. Gill, for Dish of Flowers,	2 00
Mrs. S. Joyce, " " "	2 00
Mrs. A. D. Wood, for Table Design,	2 00

FEBRUARY 27.

Gratuities:—

To James Cartwright, for *Lycaste Skinneri*,	2 00
James Comley, for Roses in pots,	8 00
" " " Cut Flowers,	3 00
E. S. Rand, Jr., " " "	1 00
Mrs. E. M. Gill, " " "	2 00
Miss S. W. Story, for " "	2 00
James O'Brien, for Cyclamens,	2 00
Mrs. A. D. Wood, for Dish and Vase of Flowers,	3 00
Mrs. S. Joyce, for Dish of Flowers,	2 00
Francis Putnam, for Seedling Amaryllis,	2 00
Hovey & Co., for Camellias,	1 00
A. P. Calder, for Lilacs,	1 00

MARCH 6.

Gratuities:—

To Mrs. A. D. Wood, for Dish of Flowers,	2 00
Mrs. S. Joyce, " " "	2 00
I. E. Coburn, for Vase of Roses,	1 00
James Comley, for Hybrid Perpetual Roses,	2 00
" " " Cut Flowers,	2 00
John B. Moore, " " "	2 00
Mrs. E. M. Gill, " " "	1 00
James Comley, for Plants in pots,	2 00
Francis Putnam, for Amaryllis,	1 00
Hovey & Co., for Camellias,	1 00
James O'Brien, for Cyclamens,	5 00

MARCH 13.

GREENHOUSE PLANTS.—For the best six, in bloom, to Hovey & Co.,	$20 00
CAMELLIAS.—For the best display of named varieties, cut flowers, not less than twenty blooms, to Hovey & Co.,	6 00
ORCHIDS — WINTER BLOOMING.—For the best three varieties, to Edward S. Rand, Jr.,	10 00
For the second best, to Edward S. Rand, Jr.,	8 00
PARLOR BOUQUETS.—For the best pair, to Hovey & Co.,	5 00
For the second best, to James Comley,	4 00

Gratuities:—

To James Comley, for Roses in pots,	6 00
" " " Cut Flowers,	5 00
John B. Moore, for Plants and Flowers,	3 00
James Cartwright, for *Lycaste Skinneri*,	2 00
Mrs. S. Joyce, for Dish of Flowers,	2 00
Mrs. A. D. Wood, " "	2 00
Mrs. E. M. Gill, " "	2 00
Edward S. Rand, Jr., for Cut Flowers,	1 00
Denys Zirngiebel, for Daisy Queen Victoria,	1 00
William Gray, Jr., for Azaleas,	5 00
Marshall P. Wilder, " "	2 00
Hovey & Co., for Camellias,	5 00
" " " Basket of Camellias,	3 00
" " " Cut Flowers,	2 00
Francis Putnam, for Amaryllis,	1 00

MARCH 20.

Gratuities:—

To James Comley, for Hybrid Perpetual Roses,	5 00
Francis Putnam, for Amaryllis,	1 00
Mrs. A. D. Wood, for Dish of Flowers,	1 00
Mrs. S. Joyce, " " "	1 00
Mrs. C. N. S. Horner, for Native Plants and Flowers,	1 00
Mrs. E. M. Gill, for Cut Flowers,	1 00
Edward S. Rand, Jr., for Cherokee Rose,	1 00
Hovey & Co., for Vase of Roses,	1 00
C. M. Atkinson, for *Erica rubra calyx*,	1 00

March 27.

Gratuities:—

To James Comley, for Plants and Flowers,	$5 00
C. M. Atkinson, for Plants in pots,	10 00
C. B. Gardiner, for Cyclamen,	2 00
J. B. Moore, for Azaleas,	3 00
A. McLaren, " "	2 00
Hovey & Co., for Camellias and Roses,	2 00
Mrs. E. M. Gill, for Dish of Flowers,	2 00
Mrs. S. Joyce, " " "	1 00

April 2.

Gratuities:—

To H. H. Hunnewell, for Azaleas and Rhododendrons,	6 00
George E. Davenport, for Native Plants,	1 00
Miss S. W. Story, for Cut Flowers,	2 00
James Comley, " " "	4 00
James McTear, " " "	3 00
J. B. Moore, " " "	2 00
Mrs. E. M. Gill, " " "	2 00
Hovey & Co., " " "	3 00
James Comley, for Plants in pots,	2 00
Joseph Tailby, for Giant Candytuft,	1 00
Mrs. S. Joyce, for Table Design,	2 00
A. McLaren, for Azaleas,	2 00
Hovey & Co., for Camellias,	3 00
Mrs. A. D. Wood, for Dish of Flowers,	2 00
Waldo O. Ross, for Plants in pots,	5 00
James Nugent, for Vase of Roses,	1 00

AZALEA EXHIBITION.

April 10.

Indian Azaleas.—For the best six named varieties, in pots, to Marshall P. Wilder,	$25 00
For the best six named varieties, in eight inch pots, to Hovey & Co.,	15 00
For the best single specimen, to Marshall P. Wilder,	10 00

HANGING BASKETS.—The plants to have been growing in them at least one month.—For the best specimen, to James McTear, ... $5 00
For the second best, to Hovey & Co., . . . 4 00
BASKET OF FLOWERS.—For the best arranged, to Mrs. A. D. Wood, ... 4 00
For the second best, to Mrs. S. Joyce, . . . 3 00

Gratuities:—

To Hovey & Co., for Cut Flowers, ... 5 00
James Comley, " " " 3 00
James McTear, " " " 1 00
James O'Brien, " " " 2 00
James Comley, for splendid Basket of Roses, . . 5 00
" " " Plants in pots, ... 5 00
James McTear, for specimen Azalea, . . . 2 00
" " " Azaleas, ... 3 00
" " " Bouquets, ... 3 00
William Edgar, for *Statice Holfordii*, . . . 5 00
J. H. Woodford, for Amaryllis, ... 2 00
Mrs. E. M. Gill, for Vases of Flowers, . . . 2 00
E. S. Rand, Jr., for rare Orchids, ... 5 00
J. B. Moore, for Pansies, ... 1 00
Hovey & Co., for Plants in pots, ... 2 00

APRIL 17.

Gratuities:—

To James McTear, for Bouquets and Cut Flowers, . 3 00
Mrs. S. Joyce, for Dish of Flowers, ... 2 00
E. S. Rand, Jr., for *Oncidium leucochilum*, . . 1 00
John Robinson, for Native Shrubs and Flowers, . 2 00
H. H. Hunnewell, for Clematis Lord Londesboro, . 5 00
Mrs. E. M. Gill, for Cut Flowers, ... 2 00
James Comley, " " " 1 00

APRIL 24.

Gratuities:—

To E. S. Rand, Jr., for Roses and Violets, . . . 2 00
J. Tailby, for *Lilium auratum*, ... 2 00

To Mrs. S. Joyce, for Dish of Flowers, ... $2 00
James Comley, for Plants and Flowers, . . . 3 00
James McTear, for Bouquet and Cut Flowers, . . 2 00
C. L. Allen, for *Lilium longiflorum*, ... 2 00
J. B. Moore, for Cut Flowers, ... 2 00
Mrs. E. M. Gill, for Cut Flowers, ... 2 00
Miss S. W. Story, for Cut Flowers, ... 2 00
J. H. Woodford, for Amaryllis, ... 1 00
C. M. Atkinson, for Plants in pots, ... 3 00

May 1.

Gratuities:—

To Mrs. C. N. S. Horner, for Native Plants, . . . 2 00
E. S. Rand, Jr., for Orchids, ... 3 00
Joseph Tailby, for Roses, ... 1 00
James Comley, for Plants in pots, ... 2 00
" " " fine White Stocks, . . . 1 00
" " " Cut Flowers, ... 3 00
Mrs. S. Joyce, " " " 2 00
J. H. Woodford, for Cut Flowers, ... 2 00
Mrs. E. M. Gill, " " " 1 00
Miss S. W. Story, for Cut Flowers, ... 1 00
James McTear, for Azaleas, ... 3 00
Mrs. A. D. Wood, for Dish of Flowers, . . . 2 00

May 8.

Gratuities:—

To E. S. Rand, Jr., for Orchids, ... 2 00
James McTear, for Bouquets and Cut Flowers, . 2 00
J. H. Woodford, for Cut Flowers, ... 1 00
Miss S. W. Story, for Cut Flowers, ... 1 00
James Comley, " " " 3 00
Mrs. E. M. Gill, " " " 3 00
Mrs. A. D. Wood, for Vases of Flowers, . . . 3 00
James Comley, for *Cereus flagelliformis*, . . . 1 00
J. A. Foster, for Stocks, ... 1 00
Mrs. S. Joyce, for Dish of Flowers, ... 2 00

PELARGONIUM EXHIBITION.

MAY 15.

PELARGONIUMS.—For the best six named Zonale varieties, not variegated, to William Gray, Jr.,	$15 00
For the second best, to William Gray, Jr.,	10 00
For the best six named variegated Zonale varieties, to William Gray, Jr.,	15 00
For the second best, to William Gray, Jr.,	10 00
For the best six named Bronze varieties, to William Gray, Jr.,	15 00
For the second best, to Hovey & Co.,	10 00
For the best six named Double Zonale varieties, to Hovey & Co.,	15 00
For the second best, to William Gray, Jr.,	10 00
SPRING HERBACEOUS PLANTS.—For the best display of named species and varieties, one bottle of each variety, to E. S. Rand, Jr.,	6 00
TABLE DESIGN.—For the best, other than a Basket of Flowers, to Mrs. A. D. Wood,	4 00
For the second best, to Mrs. E. M. Gill,	3 00
TULIPS.—For the best ten Flowers, to C. M. Atkinson,	5 00

Special Prizes for Pelargoniums, offered by William Gray, Jr.

For the best six named Zonale varieties, not variegated, to Hovey & Co.,	$25 00
For the best six Zonale varieties, variegated, to H. H. Hunnewell,	25 00
For the second best, to Hovey & Co.,	15 00
For the best specimen Zonale, not variegated, to Hovey & Co.,	10 00
For the best specimen Zonale, variegated, to Hovey & Co.,	10 00

Gratuities:—

To James Comley, for Cut Flowers,	3 00
Miss S. W. Story, for Cut Flowers,	3 00
Miss A. C. Wheeler, for Cut Flowers,	1 00
J. B. Moore, " " "	3 00

To Mrs. S. Joyce, for Cut Flowers, ... $1 00
E. S. Rand, Jr., " " " 2 00
Hovey & Co., " " " 1 00
" " for *Cattleya Mossiæ*, ... 2 00
" " for Azaleas, ... 2 00
" " for Collection of Plants, . . . 5 00
Miss A. C. Kenrick, for *Magnolia conspicua*, . . 1 00
J. A. Foster, for Stocks, ... 1 00
J. McTear, for Bouquets and Cut Flowers, . . 3 00
George E. Davenport, for *Cypripedium spectabile*, . 1 00
James Comley, for Plants in pots, ... 5 00
" " " specimen Plant, ... 3 00
" " " new Double Lobelia, . . . 2 00
H. H. Hunnewell, for choice Plants in pots, . . 6 00
James Nugent, for *Rhyncospermum jasminioides*, . 3 00
James McTear, for Pelargonium Distinction, . . 1 00
William Gray, Jr., for a fine collection of Zonale and Variegated Pelargoniums, ... 16 00
John C. Hovey, for new Sempervivums, . . . 2 00

May 22.

Gratuities: —

To J. H. Woodford, for Cut Flowers, . . . 2 00
J. B. Moore, " " " . . . 2 00
James Comley, " " " . . . 3 00
E. Shepherd, " " " . . . 1 00
H. H. Hunnewell, " choice collection of Azaleas, 10 00
Mrs. A. D. Wood, " Dish of Flowers, . . . 2 00
Mrs. E. M. Gill, " " " . . . 2 00
Mrs. S. Joyce, " " " . . . 2 00
James McTear, " Pelargoniums, . . . 2 00
Mrs. C. N. S. Horner, for Native Plants and Flowers, 2 00

May 29.

Gratuities: —

To Francis Parkman for Aquilegias, ... 1 00
Miss A. C. Kenrick, for Magnolias, ... 1 00

June 5.

Pelargoniums.—For the best six named show varieties, in pots, the second prize to J. B. Moore, . . 5 00

Tree Pæonies. — For the best six named varieties, to Marshall P. Wilder,	$5 00
Cut Flowers. — For the best display, filling 150 bottles, to James Comley,	6 00
For the second best, to James McTear,	5 00
Table Design. — For the best, other than a Basket of Flowers, to Mrs. A. D. Wood,	4 00
For the second best, to Mrs. S. Joyce,	3 00
Bouquets — For the best pair of Parlor Bouquets, to James McTear,	4 00
Hardy Shrubs —For the best display, to Miss S. W. Story,	5 00
For the second best, to James McTear,	5 00
Gratuities: —	
To E. S. Rand, Jr., for Hardy Azaleas,	1 00
" " " " Orchids,	5 00
Mrs. Gardner Brewer, for Orchids,	1 00
Francis Parkman, for Aquilegias,	2 00
Miss A. C. Kenrick, for Cut Flowers,	1 00
" S. W. Story, " " "	1 00
E. S. Rand, Jr., for Shrubs,	1 00
J. F. Rogers, for Ericas,	4 00
J. B. Moore, " Cut Flowers,	2 00
Miss A. C. Wheeler, for Dish of Flowers,	1 00
Mrs. E. M. Gill, " " "	1 00
J. H. Woodford " Late Tulips,	2 00
Marshall P. Wilder, " Tree Pæonies,	4 00

June 12.

Iris (Tuberous varieties). — For the best twelve named varieties, to James McTear,	4 00
Rhododendrons. — For the best twelve named varieties, one truss of each, to E. S. Rand, Jr.,	10 00

Hunnewell Premiums.

Hardy Rhododendrons. — For the best display of named varieties, to E. S. Rand, Jr.,	35 00
Hardy Azaleas.—For the best display of named varieties, to E. S. Rand, Jr.,	20 00
For the second best, to Hovey & Co.,	10 00
For the third best, to Joseph Clark,	5 00

Gratuities:—

To H. H. Hunnewell, for Azaleas and Rhododendrons,		$10 00
Hovey & Co.,	" Rhododendrons,	3 00
James Comley,	" *Nertera depressa*,	1 00
Francis Parkman,	" Aquilegias,	2 00
Mrs. E. M. Gill,	" Basket of Flowers,	1 00
John B. Moore,	" Cut Flowers,	2 00
Miss A. C. Kenrick,	" " "	1 00
James Comley,	" " "	2 00
Miss S. W. Story,	" " "	2 00
Mrs. C. N. S. Horner, for Native Flowers,		3 00
James McTear, for Bouquet,		2 00
" "	" Cut Flowers,	1 00
Miss A. C. Wheeler, for Cut Flowers,		1 00
Hovey & Co., for Cacti,		2 00
Mrs. S. Joyce, for Dish of Flowers,		2 00
Miss E. M. Harris, for Pæonies,		1 00

JUNE 19.

Gratuities:—

To E. S. Rand, Jr., for Rhododendrons and Azaleas,		3 00
James Comley, for Cut Flowers,		1 00
James McTear, for Bouquets,		1 00
Francis Parkman, for choice Herbaceous Plants,		2 00
Miss A. C. Wheeler, for Dish of Flowers,		1 00
Mrs. A. D. Wood,	" " "	1 00
Mrs. S. Joyce,	" " "	1 00

JUNE 26.

Gratuities:—

To W. H. Spooner, for Roses,		1 00
James Comley,	" Hybrid Perpetual Roses,	1 00
E. S. Rand, Jr.,	" Cut Flowers,	2 00
E. Shepherd,	" " "	1 00
Miss A. C. Kenrick, for Cut Flowers,		1 00
Mrs. S. Joyce, for Basket of Flowers,		1 00

ROSE EXHIBITION.

June 28.

Hardy Perpetuals. — For the best twenty-four distinct named varieties, to J. C. Chaffin, . . .	$20 00
For the second best, to William Gray, Jr., . .	15 00
For the best twelve distinct named varieties, to William Gray, Jr., ...	10 00
For the second best, to James Comley, . . .	8 00
Moss Roses.—For the best twelve named varieties, to A. McLaren, ...	10 00
Tender Roses.—For the best twelve named varieties, to James Comley, ...	10 00
For the second best, to E. S. Rand, Jr., . .	8 00
Roses.—For the best general display, to Joseph Clark, .	15 00
For the second best, to J. S. Richards, . . .	10 00

Special Prizes for Hybrid Perpetual Roses, offered by H. H. Hunnewell. Open to all.

For the best six named varieties, to J. C. Chaffin, . .	$20 00
For the second best, to William Gray, Jr., . .	10 00
For the best twelve of any one variety, to William Gray, Jr., ...	20 00
For the second best, to John C. Chaffin, . . .	10 00

Plants in Pots.

Greenhouse Plants.—For the best twelve Greenhouse or Stove Plants of different varieties, to William Gray, Jr., ...	30 00
For the second best to James Comley, . . .	25 00
For the best six Greenhouse or Stove Flowering Plants of different varieties, to E. S. Rand, Jr., . .	30 00
Specimen Plant.—Regard being had to new and rare varieties.	
For the best specimen plant of a kind for which no special prize is offered, to James Comley, . .	10 00
Gloxinias.—For the best single specimen plant, to Joseph Clark, ...	3 00

NATIVE PLANTS.—For the best display of named species and varieties, one bottle of each, to Mrs. C. N. S. Horner, ... $5 00

WARDIAN CASE.—For the best specimen, to W. H. Halliday, ... 15 00

For the second best, to J. F. Mann, . . . 10 00

FERN CASE.—For the best, not to exceed fifteen inches in diameter, to W. H. Halliday, ... 5 00

For the second best, to William Edgar, . . . 4 00

Cut Flowers.

HERBACEOUS PÆONIES.—For the best ten named varieties, to Hovey & Co., ... 5 00

SWEET WILLIAMS.—For the best thirty trusses, not less than ten distinct varieties, to James Nugent, . 4 00

For the second best, to James McTear, . . . 3 00

SUMMER HERBACEOUS PLANTS.—For the best display of named species and varieties, to James McTear, 5 00

CUT FLOWERS.—For the best display, to James Comley, 5 00

TABLE DESIGN.—For the best, other than a Basket of Flowers, to James O'Brien, ... 5 00

For the second best, to Mrs. A. D. Wood, . . 4 00

For the third best, to Mrs. S. Joyce, . . . 3 00

BOUQUETS.—For the best pair of Parlor Bouquets, to James McTear, ... 3 00

For the best pair of Hand Bouquets, to James O'Brien, ... 4 00

For the second best, to James Nugent, . . . 3 00

Gratuities:

To William Edgar, for Plants in pots, ... 10 00

C. M. Atkinson, for Gloxinias, ... 3 00

J. McTear, for *Kalosanthes coccinea*, . . . 2 00

Marshall P. Wilder, for Gloxinias, ... 3 00

James Comley, for Plants in pots, ... 3 00

James McTear, " " in baskets, . . . 3 00

J. A. Black, for Hybrid Perpetual Roses, . . . 2 00

J. W. Wilcox, for Roses, ... 2 00

J. H. Woodford, " 5 00

Samuel Hartwell, " 2 00

To C. M. Atkinson, for Carnations,	$2 00
E. Shepherd, for Cut Flowers,	2 00
George N. Noyes, for Cut Flowers,	2 00
Miss S. W. Story, " " "	1 00
Miss A. C. Wheeler, " "	1 00
E. S. Rand, Jr., for *Magnolia macrophylla*,	1 00
Miss A. C. Kenrick, " "	1 00
John B. Moore, for *Trichinium Manglesii*,	1 00
E. S. Rand, Jr., for Orchids,	2 00
M. W. Clark, for *Myosotis*,	1 00
J. C. Hovey, for Herbaceous Plants,	2 00
Francis Parkman, for *Aquilegia chrysantha*,	1 00
J. Tailby, for Giant Candytuft,	1 00

JULY 2.

DELPHINIUMS.—For the best ten named varieties, to A. McLaren,	4 00
SUMMER PHLOXES.—For the best ten named varieties, the third prize to James McTear,	2 00
CUT FLOWERS.—For the best display, to A. McLaren,	5 00
BASKET OF FLOWERS.—For the best arranged, to Mrs. A. D. Wood,	3 00
For the second best, to Mrs. S. Joyce,	2 00

Gratuities:

To A. McLaren, for Campanulas,	1 00
Hovey & Co., for Pæonies,	2 00
Miss A. C. Wheeler, for Dish of Flowers,	1 00
E. H. Hitchings, for Native Flowers,	2 00
Mrs. C. N. S. Horner, " "	3 00
Mrs. E. M. Gill, for Basket of Flowers,	2 00
Frank Bigelow, for Sweet Williams,	1 00
Miss A. C. Kenrick, for *Magnolia macrophylla*,	1 00
W. H. Spooner, for Moss Roses,	2 00
Hovey & Co., for Pelargonium Asa Gray,	1 00
James Comley, for Cut Flowers,	2 00
George N. Noyes, " "	2 00
Mrs. C. B. Chase, for Cut Flowers,	1 00

JULY 10.

SUMMER LILIES.—For the best six spikes, to W. K. Wood,	$5 00
CUT FLOWERS.—For the best display, to W. K. Wood,	5 00
For the second best, to James Comley,	4 00
For the third best, to A. McLaren,	3 00
TABLE DESIGN.—For the best, to James O'Brien,	3 00
For the second best, to Mrs. S. Joyce,	2 00
Gratuities:	
To Miss A. C. Wheeler, for *Lilium candidum*,	1 00
Francis Parkman, for Herbaceous Plants,	2 00
Mrs. C. N. S. Horner, for Native Flowers,	2 00
E. A. Story, for Lilies,	1 00
James Comley, for Roses,	3 00
Joseph Clark, for Gloxinias,	3 00
E. Shepherd, for Cut Flowers,	1 00
Mrs. E. M. Gill, for Cut Flowers,	2 00
Miss A. C. Kenrick, for Cut Flowers,	1 00
James Nugent, " " "	2 00
Marshall P. Wilder, for Gloxinias,	1 00
Hovey & Co., for Orchids,	5 00
J. B. Moore, for Cut Flowers,	1 00
J. S. Richards, for Cut Flowers,	3 00
H. Gleason, for Lilies,	3 00
Hovey & Co., for *Rhododendron maximum*,	1 00

JULY 17.

STOCKS.—For the best display, not less than six varieties, 25 bottles, three spikes in each bottle, the second prize to Mrs. E. M. Gill,	3 00
CUT FLOWERS.—For the best display, filling 150 bottles, to James Comley,	5 00
For the second best, to W. K. Wood,	4 00
TABLE DESIGN.—For the best, other than a Basket of Flowers, to Mrs. S. Joyce,	3 00
For the second best, to Mrs. E. M. Gill,	2 00
NATIVE PLANTS.—For the best display of named species and varieties, one bottle of each, to Mrs. C. N. S. Horner,	5 00
For the second best, to E. H. Hitchings,	4 00
PICOTEES.—For the best ten named varieties, to James Nugent,	5 00

Gratuities:—

To E. S. Rand, Jr., for *Dendrobium Wardianum*,	$2 00
Warren Heustis, for *Lilium auratum*,	1 00
Mrs. Cummings, for *Campanula garganica*,	1 00
James Comley, for *Sempervivum Californicum*,	2 00
Mrs. Stiles Frost, for Bouquets of Sweet Peas,	1 00
Mrs. C. N. S. Horner, for Native Flowers,	1 00
C. M. Atkinson, for Hollyhocks and Carnations,	1 00
Joseph Clark, for choice Flowers,	1 00
Mrs. A. D. Wood, for Dish of Flowers,	2 00
James Nugent, for Cut Flowers,	2 00
Miss A. C. Wheeler, for Cut Flowers,	1 00
A. McLaren, for Cut Flowers,	2 00

JULY 24.

HOLLYHOCKS.—For the best twelve spikes of twelve distinct colors, to Joseph Clark,	10 00
For the second best, to J. S. Richards,	8 00
ORCHIDS.—For the best three varieties, in bloom, to E. S. Rand, Jr.,	10 00
For the second best, to E. S. Rand, Jr.,	8 00
CUT FLOWERS.—For the best display, filling 150 bottles, to James Comley,	5 00
For the second best, to W. K. Wood,	4 00
For the third best, to A. McLaren,	3 00
BASKETS OF FLOWERS.—For the best arranged, to Mrs. S. Joyce,	3 00
BOUQUETS.—For the best pair of Parlor Bouquets, the second prize to James Nugent,	2 00
For the best pair of Hand Bouquets, to James Nugent,	3 00
For the second best, to Mrs. S. Joyce,	2 00

Gratuities:—

To Thomas Tapper, for Plants in pots,	2 00
Mrs. Stiles Frost, for Bouquets,	1 00
Warren Heustis, for *Lilium auratum*,	1 00
C. T. Hubbard, for *Stanhopea tigrina*,	3 00
E. S. Rand, Jr., for Passiflora Empress Eugenie,	2 00
W. H. Spooner, for Phlox Drummondi,	1 00
James O'Brien, for Lilies,	1 00

To Mrs. C. N. S. Horner, for Native Flowers,	$2 00
Hovey & Co., for Cut Flowers,	2 00
Miss A. C. Wheeler, for Dish of Flowers,	1 00
Mrs. C. B. Chase " " " "	1 00
Mrs. A. D. Wood, " " " "	2 00
Mrs. E. M. Gill, " " " "	2 00
Hovey & Co., for Orchids,	3 00
C. M. Atkinson, for Carnations,	2 00
James Nugent, for *Yucca filamentosa*,	1 00

July 31.

Cut Flowers.—For the best display, filling 150 bottles, the third prize to W. K. Wood,	3 00
For the best collection of fifty named varieties of Greenhouse Flowers, to James Comley,	6 00
For the second best, to Hovey & Co.,	4 00
Basket of Flowers.—For the best arranged, to Mrs. S. Joyce,	3 00
For the second best, to Mrs. A. D. Wood,	2 00
Fungi.—For the best collection, to W. K. Wood,	4 00
For the second best, to Mrs. E. M. Gill,	3 00

Gratuities:—

To Macey Randall for Dahlias,	1 00
W. K. Wood, for Seedling Petunias,	1 00
E. Shepherd, for *Dianthus*,	2 00
George E. Davenport, for *Habenaria psychodes*,	1 00
E. H. Hitchings, for Native Plants and Flowers,	2 00
Mrs. C. N. S. Horner, for Native Plants,	2 00
Miss A. C. Wheeler, for Dish of Flowers,	1 00
W. P. Plimpton, for *Lilium auratum*,	1 00
James Comley, for Plants in pots,	3 00
Mrs. E. M. Gill, for Plants and Flowers,	3 00
F. W. Andrews for Begonias,	2 00
Hovey & Co., for *Lilium lancifolium* var. *Melpomene*,	1 00
A. McLaren, for Summer Phlox,	1 00
James Comley, for Cut Flowers,	2 00
E. S. Rand, Jr., for Cut Flowers,	1 00
James Nugent, " " "	1 00

August 7.

Balsams.—For the best twelve spikes, eight varieties, to J. B. Moore,	$4 00
For the second best, to James Comley,	3 00
Bouquets.—For the best pair of Hand Bouquets, to James Nugent,	3 00
For the second best, to Mrs. S. Joyce,	2 00
Cut Flowers.—For the best display, filling 150 bottles, to James Comley,	5 00
For the second best, to J. S. Richards,	4 00
For the third best, to W. K. Wood,	3 00
For the best collection of fifty named varieties of Annuals and Perennials, to C. M. Atkinson,	6 00
Table Design.—For the best, other than a Basket of Flowers, to Mrs. E. M. Gill,	3 00
For the second best, to Mrs. S. Joyce,	2 00

Gratuities:—

To James Comley, for Begonias (tuberous rooted),	3 00
E. S. Rand, Jr., for *Lilium superbum*,	1 00
E. H. Hitchings, for Native Flowers,	1 00
Mrs. C. N. S. Horner, for Native Flowers,	2 00
George E. Davenport, for Native Plants,	1 00
James Nugent, for Cut Flowers,	1 00
E. S. Rand, Jr., " " "	1 00
Miss S. W. Story, " " "	1 00
John B. Moore, " " "	1 00
Mrs. A. D. Wood, for Basket of Flowers,	1 00
J. Warren Merrill, for *Dianthus*,	1 00
James Cartwright, for Seedling Gladioli,	1 00
Herbert Gleason, for Gladioli,	1 00

August 14.

Late Phloxes.—For the best ten distinct named varieties, to Hovey & Co.,	4 00
For the second best, to James McTear,	3 00
For the best Seedling, the Society's Silver Medal to Francis Parkman.	

Petunias.—For the best collection of double and single, filling 50 bottles, not more than three spikes in a bottle, to James O'Brien,	$4 00
For the second best, to W. K. Wood,	3 00
Lilies.—For the best display of *Lilium lancifolium*, to James Comley,	5 00
Cut Flowers.—For the best display, filling 150 bottles, to James Comley,	5 00
For the second best, to James O'Brien,	4 00
For the third best, to W. K. Wood,	3 00
For the best collection of fifty named varieties of Greenhouse Flowers, the second prize to Hovey & Co.,	4 00
Basket of Flowers.—For the best arranged, to Mrs. A. D. Wood,	3 00
For the second best, to Mrs. S. Joyce,	2 00
Native Ferns.—For the best display of named species, one bottle of each, to J. Warren Merrill,	5 00
For the second best to Mrs. C. N. S. Horner,	4 00

Gratuities:

To E. S. Rand, Jr., for Orchids,	3 00
Miss S. W. Story, for Cut Flowers,	2 00
E. S. Rand, Jr., for Cut Flowers,	1 00
E. Shepherd, " " "	1 00
A. McLaren, " " "	2 00
W. H. Spooner, " " "	2 00
E. H. Hitchings, for Native Flowers,	2 00
George E. Davenport, for Native Flowers,	1 00
C. W. W. Wellington, for *Liatris*,	1 00
J. S. Richards, for Gladioli,	4 00
James Cartwright, for Gladioli,	2 00
George Craft, " "	2 00
James Comley, " "	2 00
Macey Randall, for Dahlias,	1 00
C. E. Grant, for *Lilium auratum*,	1 00

August 21.

Gladioli.—For the best twenty named varieties, in spikes, to J. S. Richards,	10 00

For the second best, to George Craft, . . .	$8 00
For the best ten named varieties, in spikes, to George Craft, ...	6 00
For the second best, to J. S. Richards, . . .	5 00
For the best display of named or unnamed varieties, to J. S. Richards, ...	10 00
For the second best, to George Craft, . . .	8 00
For the third best, to Herbert Gleason, . .	6 00
Bouquets.—For the best pair of Parlor Bouquets, to James Nugent, ...	3 00
For the best pair of Hand Bouquets, to Mrs. S. Joyce,	3 00
For the second best, to James Nugent, . . .	2 00
Cut Flowers.—For the best display, filling 150 bottles, to James Comley, ...	5 00
For the second best, to W. K. Wood, . . .	4 00
For the third best, to James O'Brien, . . .	3 00
Table Design.—For the best, other than a Basket of Flowers, to Mrs. S. Joyce, ...	3 00
For the second best, to Mrs. A. D. Wood, . .	2 00

Gratuities:

To E. Shepherd for *Lilium auratum*, ...	2 00
William Falconer, for Gladioli, ...	2 00
C. L. Allen, Queens, N. Y., for Gladioli, . . .	2 00
William H. Spooner, " " . . .	1 00
Macey Randall, for Dahlias.	2 00
Mrs. E. M. Gill, for Dish of Flowers, . . .	1 00
A. McLaren, for Cut Flowers, ...	1 00
Mrs. C. N. S. Horner, for Native Flowers, . .	2 00

August 28.

Asters.—For the best thirty flowers, not less than ten varieties, to C. M. Atkinson, ...	5 00
For the second best, to Hovey & Co., . . .	4 00
For the third best, to J. F. Rogers, . . .	3 00
For the best twenty flowers, not less than six varieties, to Joseph Clark, ...	3 00
For the second best, to John Parker, . . .	2 00
Pompons.—For the best sixty blooms, not less than six varieties, in bunches of three of the same variety,	4 00
the third prize to James O'Brien, . . .	2 00

Cut Flowers.—For the best display, filling 150 bottles, to James Comley, ... $5 00
For the second best, to W. K. Wood, . . . 4 00
For the third best, to James O'Brien, . . . 3 00
Basket of Flowers.—For the best arranged, to Mrs. A. D. Wood, ... 3 00
For the second best, to Mrs. S. Joyce, . . . 2 00

Gratuities:

To James Comley, for Begonias and Phlox, . . . 3 00
W. H. Spooner, for Gladioli, ... 2 00
J. S. Richards, " " 3 00
George Craft, " " 3 00
Herbert Gleason," " 2 00
Miss S. W. Story, for Lilies, ... 1 00
Macey Randall, for Dahlias, ... 1 00
S. G. Stone, " " 1 00
George E. Osgood, for Native Flowers, . . . 1 00
Mrs. C. N. S. Horner, " " . . . 1 00
E. S. Rand, Jr., for Cut Flowers, ... 1 00
Miss A. C. Wheeler, for Dish of Flowers, . . 1 00
Mrs. E. M. Gill, for Design, ... 1 00
James Nugent, for Bouquets, ... 1 00

September 4.

Verbenas.—For the best collection, filling 50 bottles, to John B. Moore, ... 4 00
For the second best, to Hovey & Co., . . . 3 00
Cut Flowers.—For the best display, filling 150 bottles, to James Comley, ... 5 00
For the second best, to W. K. Wood, . . . 4 00
For the third best, to James O'Brien, . . . 3 00
For the best collection of fifty named varieties of Annuals and Perennials, to James O'Brien, . 6 00
For the second best, to James McTear, . . . 4 00
Basket of Flowers.—For the best arranged, to Mrs. A. D. Wood, ... 3 00
For the second best, to Mrs. S. Joyce, . . . 2 00
Native Plants.—For the best display of named species and varieties, one bottle of each, to Mrs. C. N. S. Horner, ... 5 00

SEPTEMBER 11.

DOUBLE ZINNIAS.—For the best thirty flowers, not less than six varieties, to George Craft,	$4 00
For the second best, to C. M. Atkinson,	3 00
For the third best, to J. B. Moore,	2 00
For the best twenty flowers, not less than four varieties, to Hovey & Co.,	3 00
For the second best, to George N. Noyes,	2 00
CUT FLOWERS.—For the best display, filling 150 bottles, to James Comley,	5 00
For the second best, to James O'Brien,	4 00
For the third best, to W. K. Wood,	3 00
For the best collection of fifty named varieties of Greenhouse Flowers, to C. M. Atkinson,	6 00
For the second best, to James McTear,	4 00
BASKET OF FLOWERS.—For the best arranged, to Mrs. A. D. Wood,	3 00
For the second best, to Miss S. W. Story,	2 00
TABLE DESIGN.—For the best, other than a Basket of Flowers, to Mrs. E. M. Gill,	3 00
For the second best, to Mrs. S. Joyce,	2 00

ANNUAL EXHIBITION.

SEPTEMBER 21, 22, 23, and 24.

GREENHOUSE PLANTS.—For the best twelve greenhouse and stove plants, of different varieties, to Edward Butler,	$40 00
For the second best, to Hovey & Co.,	35 00
SPECIMEN PLANT.—For the best, not variegated, of a kind for which no special prize is offered, to Edward Butler,	10 00
For the second best, to Hovey & Co.,	6 00
SPECIMEN FLOWERING PLANT.—The second prize to E. S. Rand, Jr.,	6 00
VARIEGATED LEAVED PLANTS.—For the best six varieties, not offered in the collection of greenhouse plants, to James Comley,	15 00
For the second best, to Hovey & Co.,	10 00

For the best single specimen, not offered in any collection, to Hovey & Co., ... $5 00
For the second best, to James Comley, . . . 4 00
Caladiums.—For the best six varieties, to Hovey & Co., 6 00
For the second best, to James Comley, . . . 5 00
Ferns.—For the best twelve named varieties, to J. Warren Merrill, ... 15 00
For the second best, to James Comley, . . . 10 00
For the best six named new varieties, to George Higginson, ... 10 00
For the second best, to Edward Butler, . . . 6 00
Tree Ferns.—For the best pair, to J. Warren Merrill, . 15 00
For the best single specimen, not offered in any collection, to James Comley, ... 6 00
Dracænas.—For the best six named varieties, to H. H. Hunnewell, ... 10 00
For the second best, to James Comley, . . . 6 00
Palms.—For the best pair, to Hovey & Co., . . . 10 00
Agaves.—For the best six distinct varieties, to E. S. Rand, Jr., ... 15 00
For the second best, to Hovey & Co., . . . 10 00
Cacti.—For the best twenty-five species and varieties, to J. C. Hovey, ... 10 00
For the second best, to Hovey & Co., . . . 8 00
Succulents.—For the best collection (other than Agaves and Cacti) of twenty-five species and varieties, to J. C. Hovey, ... 15 00
For the second best, to Hovey & Co., . . . 10 00
Best New Pot Plant.—It having never before been shown at any exhibition of the Society, the Society's Silver Medal, to H. H. Hunnewell.
Hanging Baskets.—The plants to have been growing in them at least one month.
For the best, to James McTear, ... 5 00
For the second best, to John Vose, . . . 4 00
For the third best, to Walsh Brothers, . . . 3 00
Gladioli.—For the best display and best kept during the exhibition, of named or unnamed varieties, filling 200 bottles, to J. S. Richards, . . . 10 00
For the second best, to A. McLaren, . . . 8 00

DAHLIAS.—Prizes to be awarded the second day of the exhibition.

For the best twenty-four named varieties, to Macey Randall, ... $6 00

For the second best, to S. G. Stone, . . . 5 00

For the best general display, of large flowers only, filling 100 bottles, to Hovey & Co., . . . 8 00

For the second best, to Macey Randall, . . . 6 00

LILIPUTIAN.—For the best general display, filling 50 bottles, to Macey Randall, ... 4 00

For the second best, to S. G. Stone, . . . 3 00

PARLOR BOUQUETS.—For the best pair, to be exhibited on Wednesday, to James Nugent, . . . 6 00

HAND BOUQUETS.—For the best pair on Wednesday, to James Nugent, ... 6 00

For the second best, to Mrs. E. M. Gill, . . 4 00

PARLOR BOUQUETS.—For the best pair, to be exhibited on Thursday, to James Nugent, ... 6 00

For the second best, to James O'Brien, . . . 4 00

HAND BOUQUETS.—For the best pair on Thursday, to James Nugent, ... 6 00

For the second best, to Mrs. S. Joyce, . . . 4 00

LARGE BOUQUETS.—For the best pair, suitable for the Bradlee or Jones Vases, and best kept during the exhibition, to James Nugent, ... 10 00

CUT FLOWERS.—For the best display and best kept during the exhibition, to Hovey & Co., . . . 18 00

For the second best, to James Comley, . . . 16 00

For the third best, to James O'Brien, . . . 14 00

For the fourth best, to J. S. Richards, . . . 12 00

For the fifth best, to James Nugent, . . . 10 00

For the sixth best, to James McTear, . . . 8 00

For the seventh best, to John Parker, . . . 6 00

BASKET OF FLOWERS.—For the best arranged, to be exhibited on Tuesday, to Mrs. A. D. Wood, . . 5 00

For the second best, to Miss S. W. Story, . . 4 00

For the best arranged, to be exhibited on Thursday, to Mrs. A. D. Wood, ... 5 00

For the second best, to Miss S. W. Story, . . 4 00

RUSTIC STAND.—For the best specimen, not less than

three feet in height, to be planted with choice plants, to James Comley, ... $10 00
For the second best, to Walsh Brothers, . . 8 00

Table Design.—For the best, to be arranged without fruit, and not to exceed four feet in height, to Mrs. E. M. Gill, ... 10 00
For the second best, to Mrs. S. Joyce, . . . 8 00

Hunnewell Premiums.

Evergreen Trees and Shrubs.—For the best display, in pots, to Hovey & Co., ... 8 00
For the second best, to James Comley, . . . 5 00

Gratuities:—

To C. M. Atkinson, for *Tacsonia princeps*, . . . 2 00
" " " *Crassula corymbulosa*, . . 1 00
John L. DeWolf, for *Amaryllis Belladonna*, . . 3 00
Jackson Dawson, " *Desmodium pendulæflorum*, . 2 00
J. W. Merrill, " *Rochea falcata*, . . . 2 00
E. S. Rand, Jr., " *Epidendrum cuspidatum*, . . 2 00
James Comley, for New Plants, ... 6 00
" " " Collection of Plants, . . 25 00
F. W. Andrews, " " " . . . 10 00
E. S. Rand, Jr., " " " . . . 8 00
Hovey & Co., " " " . . . 10 00
Walsh Brothers, " " " . . . 20 00
" " " Hanging Baskets, . . . 10 00
J. W. Merrill, " rare Ferns, ... 8 00
George Higginson, for choice Ferns, . . . 8 00
J. W. Merrill, for Filmy Ferns, ... 3 00
A. B. Gilbert, " Ferns, ... 2 00
A. Greenlaw, " Wardian Case, ... 4 00
Samuel G. Stone, for Asters, ... 3 00
John C. Hovey, " new and rare Succulents, . 10 00
Hovey & Co., " fine pair of Box Trees, . . 5 00
Mrs. C. N. S. Horner, for Native Plants and Flowers, 4 00
George Everett, for Dahlias, ... 3 00
Macey Randall, " " 1 00
W. H. Spooner, " Lilies and Gladioli, . . . 5 00
W. C. Strong, for Variegated Foliage, . . . 2 00

To Walsh Brothers, for Cut Flowers,	$5 00
George Craft, " " "	2 00
James O'Brien, " " "	1 00
George Higginson, for Cut Flowers,	2 00
" " " Cockscombs,	2 00

October 16.

Table Design.—For the best, other than a Basket of Flowers, to Mrs. S. Joyce,	3 00
For the second best, to Mrs. E. M. Gill,	2 00
Parlor Bouquets.—For the best pair, to James Nugent,	4 00
Hand Bouquets.—For the best pair, to Mrs. S. Joyce,	3 00
For the second best pair to James Nugent,	2 00

Gratuities:

To James Comley, for Bouquet and Cut Flowers,	3 00
E. S. Rand, Jr., for Cut Flowers,	2 00
Mrs. A. D. Wood, for Dish of Flowers,	2 00
Miss A. C. Wheeler, for Dish of Flowers,	1 00

October 23.

Gratuities:

To E. S. Rand, Jr., for Orchids,	2 00
James Comley, for Cut Flowers,	2 00
Mrs. S. Joyce, for Dish of Flowers,	2 00
Mrs. A. D. Wood, for Dish of Flowers,	2 00
Mrs. E. M. Gill, " " "	2 00

October 30.

Gratuities:

To J. B. Moore, for *Lapageria alba*,	2 00
Mrs. C. N. S. Horner, for Native Flowers,	2 00
Mrs. S. Joyce, for Dish of Flowers,	2 00
E. S. Rand, Jr., for Cut Flowers,	1 00
Mrs. E. M. Gill, " " "	1 00
James Comley, " " "	2 00

CHRYSANTHEMUM SHOW.

November 6.

For the best six distinct named Large Flowered varieties, in pots, to George Higginson,	$10 00
For the best six distinct named Pompons, in pots, to George Higginson,	10 00
For the second best, to George Higginson,	6 00
For the best twelve named Pompon varieties, Cut Specimens, to Joseph Clark,	3 00
For the second best, to James Nugent,	2 00
For the best general display, named or unnamed varieties, Cut Specimens, filling 50 bottles, to Joseph Clark,	5 00
For the second best, to James Nugent,	4 00
Basket of Flowers. — For the best arranged, to Mrs. A. D. Wood,	3 00
For the second best, to Mrs. S. Joyce,	2 00
Hand Bouquets.—For the best pair, to James O'Brien,	3 00
For the second best, to James Nugent,	2 00

Gratuities:

To George Higginson, for Chrysanthemums,	4 00
James Comley, " "	4 00
Marshall P. Wilder, " "	1 00
E. S. Rand, Jr., " Orchids,	4 00
Samuel G. Stone, " Dahlias,	1 00
Hovey & Co., " *Epiphyllum*,	2 00
Miss A. C. Wheeler, " Dish of Flowers,	1 00
Mrs. E. M. Gill, " " " "	1 00
James Comley, " Table Design,	2 00
" " " Cut Flowers,	3 00

November 13.

Gratuities:

To C. M. Atkinson, for Chrysanthemums,	5 00
J. F. Rogers, " "	2 00
James McTear, " "	3 00
" " " *Nerine coruscans*,	1 00

To James Cartwright, for *Zygoptalum Mackayi*,	$2 00
Mrs. E. M. Gill, for Dish of Flowers,	2 00
Miss A. C. Wheeler, for Dish of Flowers,	1 00
Mrs. S. Joyce, for Dish of Flowers,	2 00
Mrs. A. D. Wood, for Dish of Flowers,	2 00

NOVEMBER 20.

Gratuities:

To James Comley, for *Cupania filicifolia*,	2 00
" " " Cut Flowers,	2 00
" " " Bouquets,	2 00
Mrs. A. D. Wood, for Dish of Flowers,	2 00
" S. Joyce, " " " "	2 00
" E. M. Gill, " " " "	2 00
Miss A. C. Wheeler, for " "	1 00
C. T. Hubbard, for *Maxillaria picta*,	1 00

NOVEMBER 27.

Gratuities:

To E. S. Rand, Jr., for Orchids,	4 00
C. T. Hubbard, " *Cypripedium insigne*,	2 00
Mrs. E. M. Gill, " Dish of Flowers,	1 00
Miss A. C. Wheeler, for Dish of Flowers,	1 00
Mrs. S. Joyce, for Dish of Flowers,	1 00
Mrs. A. D. Wood, for Dish of Flowers,	1 00
James Comley, for Cut Flowers,	2 00

The following Medals and Certificates of Merit have been awarded:

February 6th, to James Cartwright, for *Cœlogyne cristata*, Silver Medal.

March 13, to William Gray, Jr., for Rare Japan Evergreens, Silver Medal.

June 28th, to Joseph Clark, for Seedling Gloxinia, First Class Certificate of Merit.

June 28th, to James McTear, for *Nertera depressa*, Silver Medal.

August 14th, to Francis Parkman, for Seedling Phlox, Silver Medal.

August 14th, to Daniel Duffy, for *Amaryllis Belladonna*, Bronze Medal.

August 14th, to J. Warren Merrill, for *Lygodium palmatum*, First Class Certificate of Merit.

August 21st, to James Comley, for Seedling Tuberous Rooted Begonias, First Class Certificate of Merit.

August 21st, to J. F. C. Hyde, for Seedling Gladiolus, First Class Certificate of Merit.

September 11th, to Mrs. A. T. Perkins, for *Lilium auratum*, Silver Medal.

September 25th, to E. S. Rand, Jr., for *Nymphœa Devoniensis*, Bronze Medal.

October 16th, to Joseph Clark, for *Eucharis Amazonica*, Silver Medal.

November 27th, to William Gray, Jr., for *Cypripedium insigne*, Silver Medal.

The amount awarded to each contributor is as follows:

C. L. Allen,	$4 00	C. B. Gardiner,	$7 00
F. W. Andrews,	12 00	A. B. Gilbert,	2 00
C. M. Atkinson,	54 00	Mrs. E. M. Gill,	93 00
F. Bigelow,	1 00	Herbert Gleason,	9 00
J. A. Black,	2 00	C. E. Grant,	1 00
Mrs. Gardner Brewer,	1 00	William Gray, Jr.,	191 00
Edward Butler,	56 00	A. Greenlaw,	4 00
A. P. Calder,	1 00	W. H. Halliday,	20 00
James Cartwright,	11 00	Miss E. M. Harris,	1 00
J. C. Chaffin,	50 00	Samuel Hartwell,	2 00
Mrs. C. B. Chase,	2 00	Warren Heustis,	2 00
Joseph Clark,	48 00	George Higginson,	52 00
W. M. Clark,	1 00	E. H. Hitchings,	14 00
I. E. Coburn,	1 00	Mrs. C. N. S. Horner,	58 00
James Comley,	404 00	Hovey & Co.,	379 00
Dr. E. Cowles,	1 00	John C. Hovey,	39 00
George Craft,	33 00	C. T. Hubbard,	5 00
Mrs. Cummings,	1 00	H. H. Hunnewell,	72 00
Geo. E. Davenport,	6 00	Mrs. S. Joyce,	124 00
Jackson Dawson,	2 00	Miss A. C. Kenrick,	8 00
William Edgar,	19 00	J. F. Mann,	10 00
George Everett,	3 00	A. McLaren,	34 00
William Falconer,	2 00	J. McTear,	100 00
J. A. Foster,	2 00	J. Warren Merrill,	49 00

J. B. Moore,	$58 00	W. H. Spooner,	$14 00
Norton Bros.,	5 00	Samuel G. Stone,	21 00
Geo. N. Noyes,	4 00	Miss S. W. Story,	44 00
James Nugent,	97 00	W. C. Strong,	2 00
James O'Brien,	83 00	Joseph Tailby,	4 00
Geo. E. Osgood,	1 00	Thomas Tapper,	2 00
John Parker,	8 00	John Vose,	4 00
Francis Parkman,	10 00	Walsh Bros.,	46 00
W. P. Plimpton,	1 00	C. W. W. Wellington,	1 00
Francis Putnam,	5 00	Miss A. C. Wheeler,	18 00
E. S. Rand, Jr.,	233 00	J. W. Wilcox,	2 00
Macey Randall,	22 00	Marshall P. Wilder,	52 00
J. S. Richards,	79 00	Mrs. A. D. Wood,	99 00
John Robinson,	2 00	W. K. Wood,	47 00
J. F. Rogers,	9 00	J. H. Woodford,	14 00
W. O. Ross,	5 00	D. Zirngiebel,	1 00
E. Shepherd,	10 00		

Amount appropriated,	$2,800
" awarded,	2,777
Balance,	$23

Amount awarded for Hunnewell and Gray Special Prizes, $218.

REPORT

OF THE

COMMITTEE ON FRUITS,

FOR THE YEAR 1875.

By HERVEY DAVIS, Chairman.

The winter of 1874–5, had no very remarkable features, with the exception of the severe cold, which was unparalleled for steadiness and duration, having commenced about the first of December and continued until March, with hardly a day of mild weather such as we almost always have during the winter months, and particularly in January, when we usually have a thaw in the course of the month. The ground is believed to have frozen deeper than ever before known, and in many places in Boston and vicinity, the water pipes were frozen in places where they were never known to freeze before. It was thought by many that the extreme cold of winter would destroy most of the small fruits of New England, but we were happily disappointed in this respect, as most of the small fruits came out in the spring in fine order, and we had an abundance of most of them, particularly of strawberries, of which the crop is believed to have been one of the best for a number of years. Blackberry canes were considerably injured by the severe winter, and in some places entirely killed, so that the crop of this very valuable fruit was almost an entire failure in Massachusetts. The more tender varieties of the native grape vines, that were not protected by being covered in some way, were either killed or badly injured. It would seem from the effects of the past cold winter that it would be the wisest and safest way for all amateur grape growers who have only a limited number of vines, to have them well protected during the winter; by so doing, they will be surer of an annual crop of fruit. The season was very cold and

backward in the spring, which affected our weekly exhibitions unfavorably. The schedule of prizes having been made to suit average seasons, many of our early shows were not as good as they would have been, if the premiums for some of the fruits had been a week or two later. The exhibitions during the season, have, however, been very satisfactory, and, we think, up to the average of previous years. We notice there has been quite an improvement the past season in the quality of fruits on exhibition, which is very much to the credit of the exhibitors, and, we think, a very great satisfaction to the visitors who honor our exhibitions with their presence. We would call the attention of the exhibitors to the schedule of prizes for 1876; it will be noticed that the fruit prizes have been almost entirely changed, and, as we hope, for the better. Most of the collections have been dropped, and premiums offered for single dishes in their stead, which, it is believed, will be a great improvement on the old plan. We would also call attention to the amendment of our By-Laws, offering our premiums to all persons, whether members of the Society or not, which we hope will have the desired effect to greatly improve our exhibitions.

Strawberries.—The exhibitions of forced strawberries were not as good as last year, there having been only two baskets exhibited during the season, one March 20th, by George Cruickshanks, gardener to John C. Whitin, of Whitinsville, and the other, April 3d, by Richard Oldreive. June 5th, Charles Garfield exhibited a basket of strawberries raised in frames under glass, and he also exhibited two baskets on the 12th of June, one of Triomphe de Gand, and one of Agriculturist, both of them very fine. June 19th, Marshall P. Wilder exhibited a fine basket of President Wilder, and J. H. Woodford an extra fine basket of the same variety, both started in frames under glass. It may be inferred from these remarkably fine specimens of the President Wilder, that it is well adapted to this manner of cultivation. John B. Moore, also had four baskets of fine Jenny Lind, of open culture. At the Rose Show, June 28th (postponed from June 17th), John B. Moore was awarded the first prize for early strawberries, for his seedling, Grace, and Warren Heustis the second prize, for Colonel Cheney. At the Strawberry Show, July 2d, we have to report one of the largest and best displays of strawberries ever made by this Society. There were upon the tables one hundred and sixteen baskets and dishes of fruit, all of them good, and some of them

remarkably fine. The first prize for the best four quarts of any variety was awarded to Hovey & Co., for Hovey's Seedling; and the second to John B. Moore, for Jucunda. For the best two varieties, of four quarts each, the first prize was taken by John B. Moore, for Grace and Hovey's Seedling, and the second by B. G. Smith, for President Wilder and Jucunda. The first prize for the best four varieties, was awarded to John B. Moore for Champion, Late Prolific, Wilder, and Triomphe de Gand. The first prize for the best collection, was awarded to B. M. Watson, for twenty-one varieties. The first prize for the best fifty berries, was awarded to Warren Heustis, for Col. Cheney.

Of new varieties and seedlings, June 28, N. B. White exhibited Monarch of the West, a very large berry, but very irregular in shape and coarse in its general appearance, and not ripening evenly, most of the berries appearing to be ripe all but the small end, which was quite green, giving it a very bad appearance. The quality is not first rate, but might be called good. Augustus Parker exhibited a seedling, said to be a cross between Triomphe de Gand and Brighton Pine; berry large size, color pale red, quality not first rate.

John B. Moore, presented three new seedlings; No. 26, very large size, regular in shape, and of good color; Nos. 27 and 28, not quite as large as No. 26, otherwise about the same; the quality not as good as many of his other seedlings.

July 10th, Mr. Moore exhibited his seedling, Belle, which is one of the largest strawberries ever shown here, of very fine color and remarkably handsome, and he was awarded a First Class Certificate of Merit. He also exhibited his seedling, General Sherman, which has been described in previous reports, and is a very large and handsome fruit. Hovey & Co. exhibited their seedling No. 10, or Souvenir, which was described in last year's report.

By invitation of Mr. Moore, the Fruit Committee visited his grounds on July 1st to examine his different varieties of strawberries and his manner of growing them. They found his beds in perfect order and very free from weeds; all the fruit well protected by clean straw, and all the different varieties kept by themselves and well marked. This visit gave the Committee an opportunity to judge of the productiveness of the different varieties. Although Mr. Moore had picked many of his earliest kinds, we noticed, among others, the following varieties, from which not

many had been picked; Triomphe de Gand, President Wilder, Hovey's Seedling, Champion, Late Prolific, Jucunda, Caroline, Grace, Belle, and General Sherman; all in fine condition and full of fruit. After a thorough and careful inspection, it was the opinion of the Committee that the Caroline and Grace made the best show, and bore by far the largest crop of fruit of any of the varieties.

Cherries.—The exhibitions of this fruit have continued about the same as in previous seasons. There have been no new varieties worthy of particular mention, with the exception of J. H. Fenno's seedling, Norfolk; this is a late variety and resembles Downer's Late very much in color and size of fruit; and in flavor it was considered a decided improvement. It is quite as late in ripening, the best specimens having been shown July 24th, which will make it a valuable acquisition. The first prize for the best four varieties, July 2d, was awarded to C. E. Grant, for Knights' Early Black, Black Heart, Black Tartarian, and Black Eagle. For the best two quarts of any variety, to F. R. Shattuck, for Black Tartarian. July 10th, for the best two quarts of any variety, Phineas J. Stone, received the first prize for Black Tartarian. Knights' Early Black, Elton, Black Eagle, Black Tartarian, Downer's Late, and J. H. Fenno's seedling, Norfolk, comprised most of the varieties exhibited during the season.

Currants.—The shows of this fruit compared very favorably with those of former seasons. July 17th, the Versaillaise received all the premiums for red currants, and Dana's White, for white currants. July 24th, the first prize for a collection was awarded for the following varieties: Versaillaise, Transparent, Dana's New White, and Black Naples. In other collections, we noticed the White Grape, Cherry, and Red Dutch, which comprised nearly all the varieties shown during the season.

Gooseberries.—We have but little to say of this fruit. July 31st, Smith's Seedling received the first prize, and Downing's Seedling the second, for native varieties. For foreign varieties, the first prize was awarded for Bangup, which was one of the best dishes of this fruit exhibited during the season, and we think for several seasons; the second prize was awarded for Whitesmith; this was also a very fine dish.

Raspberries.—July 10th, the first prize was awarded for Franconia, and the second for American Black Cap. July 17th, all the

prizes were taken by the Franconia. The above were the two prize days for raspberries, but the season being late, many of the varieties were not ripe, and our best show of this fruit was July 24th, when we had a very fine collection, of the following varieties: Clarke, Saunders, Hornet, Herstine, and Franconia. We were glad to have the opportunity of testing the Herstine, which we found large and of fine quality, but not superior to the other varieties commonly cultivated here.

Blackberries.—The show of blackberries, we are sorry to say, was the most inferior for several seasons; the reason for it was probably the remarkably cold winter, which entirely killed the canes in some places, and severely injured them in others. July 31st, the prizes were awarded for the Dorchester, and there were also some very fine specimens of this variety shown August 24th, as well as some good Kittatinny and other varieties. August 7th, A. W. Cheever, exhibited the Snyder blackberry, of which there has been so much said in some of the Western States. We were unable to distinguish anything worthy of particular notice. It is said to be a great bearer, and somewhat less thorny than other varieties, but in quality we do not think it as good as the Dorchester or Wilson.

Plums.—This fruit has almost disappeared from our exhibitions, hardly any of the specimens during the season being worthy of a premium. August 21st, the first prize for a single dish was awarded for Washington. At the Annual Exhibition, Sept. 21st, the first prize for a collection, was awarded for the following varieties: Washington, Jefferson, Columbia, Coombs, Lawrence's Favorite, Prince's Yellow Gage, and Bradshaw, exhibited by Elijah Low, of Bangor, Maine; and for the best single dish for Coe's Golden Drop. John Falconer had in his collection of orchard-house fruits, the following varieties of plums: Rivers' Sultan, Prince Englebert, and Guthrie's Late Green.

Nectarines.—August 21st, John Falconer exhibited Albert Victor and Stanwick, of orchard-house culture. September 11th, J. Fisk Allen, a seedling; September 21st, he also exhibited two seedlings, one from the Violette Hative, and one from Hunt's Tawny. They were considered very fine specimens, and of good quality. September 21st, John Falconer had in his collection of orchard-house fruits, the following varieties: Rivers' Pineapple, Stanwick Elruge, and Balgowan; all of them fine specimens, well ripened, and of good quality.

Apricots.—For the first time for several years we have had the pleasure of seeing the apricot upon our tables, the Moorpark having been shown on the 14th and 21st of August.

Figs.—On the prize day for figs, only one dish was offered, and that received the first premium. At the Annual Exhibition, we had several dishes to which gratuities were awarded.

Peaches.—The exhibition of forced peaches is hardly worthy of mention, none of the prizes having been awarded. C. D. Kingman received a gratuity for specimens of Early York, which were very good. The display of orchard-house peaches, with other fruits, has been very fine, particularly those from John Falconer. August 21st, he made a very fine exhibition of peaches and nectarines, and one Souvenir de Congrès pear, weighing two pounds. At the Annual Exhibition, September 21st, his display was very fine, containing the following varieties: Alexandra Noblesse, Falcon, Magdala, Dr. Hogg, Lady Palmerston, Crimson Galande, Stanwick Early York. The crop of out-door peaches, was not as good as last season, but above the average for the past few years. August 28th, the third prize was awarded for Yellow and Red Rareripe, and the fourth for Early Crawford. September 11th, the first prize was awarded for Foster's Seedling, and the second for Early Crawford. At the Annual Exhibition, the first prize for the best single dish was awarded for Early Crawford, and the second for Foster's Seedling. The display of peaches at this exhibition was not equal to last year, but would compare favorably with those of former seasons. There were several seedlings shown during the season, but none of any great merit. September 4th, J. T. Foster exhibited his seedling, Laura. J. H. Fenno also exhibited seedlings during the season; some of them very good, but nothing better than the best varieties now under cultivation.

Apples.—The exhibition of this the most valuable of all fruits, would not compare favorably with the display last year; but this can be accounted for in part, by its being what is generally called the off year; or, in other words, the year that most of the leading varieties do not bear in the New England States. The fruit that has been shown was not equal to that of the previous year; most of it being imperfect and much of it wormy and poor.

August 7th, the first prize was awarded for Sweet Bough, and the second for Williams. August 14th, the second prize for a collection was awarded for the following varieties: Watkins' Early,

Williams, Early Harvest, Early Bough, Sops of Wine, Red Astrachan, and Duchess of Oldenburgh. The prize for Sweet Bough was awarded to Benjamin B. Davis; for Red Astrachan, to Warren Heustis; for Williams, to T. M. Davis, and for "any other variety," to T. M. Davis, for Summer Harvey. September 4th, the prizes for apples were awarded, the first for Gravenstein, and the second and third for Porter. September 11th, the first two prizes were awarded for Gravenstein. At the Annual Exhibition, the first prize for the best twenty varieties was given to F. & L. Clapp, and for the best fifteen varieties to William T. Hall. For the best ten, not awarded; for the best five to S. N. Gaut. There was no exhibition of new varieties. Many of the prizes for single dishes were awarded, and some of them were very fine specimens. October 9th, the first prize for the best five varieties, was awarded to J. H. Fenno, and for the best single dish to the same, for Washington Strawberry. November 6th, the first prize for ten varieties of winter apples, was given to J. H. Fenno. For the best single dish to Walter Russell, for Hubbardston.

August 14th, J. H. Masters, of Nebraska City, sent the following varieties of apples for exhibition: Red June, Cooper's Early White, Early Red, Buffington's Early, and Williams. Most of the above specimens arrived in bad order, which can be accounted for by their being sent so far at a season of the year when the weather was so hot. The Red June was in the best condition, and appeared to be the best in quality; we could not judge so well about the other varieties, on account of their bad order.

October 23d, Dr. Charles C. Hamilton, of Cornwallis, N. S., exhibited a very fine collection of apples, containing ten varieties, all of them fine specimens, and some of them very large and handsome. Those worthy of particular notice were Chebucto Beauty, very large and handsome; Large Yellow Bough, which, as compared with those grown in New England this year, was very much better; Ribston Pippin, much finer than with us; Yellow Bellflower, very large and handsome; Chenango Strawberry, very fine specimens, long, pale yellow, striped with red; this variety is not grown much in Massachusetts, but deserves trial here; Gravenstein, larger and more perfect specimens than ours. The whole collection was remarkably fine and very free from worms, and for it Dr. Hamilton was awarded the Society's Silver Medal.

Pears.—January 23d, the first prize for winter pears was not

awarded, as the collection shown was not worthy of it; but the second prize was awarded to J. H. Fenno, whose statement of his method of keeping is as follows: "The specimens of fruit exhibited by me this day were kept in the following manner: when picked from the trees they were placed in a dry room, and after remaining about fifteen days they were removed to a cold, damp cellar, and placed on swing shelves about one inch apart. The object in first placing them in a dry room was to produce a slight contraction of the outer skin of the fruit. I find by this experiment that both pears and apples keep longer and retain their quality much better under this treatment, as it prevents the escape of the vital fluids of the fruit. The cellar should be well ventilated." March 13th, E. A. Hall presented some very fine specimens of Winter Nelis; they were well kept and in excellent condition. On the 17th of March, J. H. Fenno presented some very fine Josephine de Malines; this is one of the best pears for this season of the year, there being but very few first-class varieties that will keep as late. April 3d, Alexander Dickinson exhibited a very good dish of Easter Beurre; they were well kept and in fine order. April 17th, F. & L. Clapp presented for inspection and trial their Seedling No. 64; the fruit is large, roundish, with a bright red cheek; thin skin, of a greenish yellow; flesh white, sweet and nearly melting; in shape not unlike the Glout Morceau. This must be one of the most valuable of their many seedlings, if it proves to be hardy and a good bearer, and will be a great acquisition to the public, as we have but few good pears that will keep until the middle of April. The above mentioned specimens were well kept and in perfect order and very handsome.

The pear crop of 1875 was more than an average one, and in some particulars quite remarkable; some varieties were larger and handsomer than ever before shown, and others much below their usual size. For instance, at the Annual Exhibition the Bartlett, Beurre Hardy, and Seckel were larger and handsomer than ever before exhibited. The largest dish of Bartlett weighed nine pounds and two ounces; the largest dish of Beurre Hardy, eight pounds five and a half ounces; Marie Louise, four pounds thirteen ounces; Seckel, three pounds three-fourths of an ounce; Beurre Diel, ten pounds nine ounces. It must be inferred that the season was particularly adapted to the above named varieties, and as an offset the Duchesse d'Angouleme and some other varieties were

very inferior and much below their usual size and beauty. July 31st, the prizes for early pears were awarded for the Doyenne d'Ete, and Beurre Giffard. August 7th, the second prize for a collection of early pears was given to J. H. Fenno for the following varieties: Beurre Giffard, Doyenne d'Ete, Madeleine, Bloodgood, and Rostiezer. The prizes for single dishes were all awarded to Beurre Giffard, and they were all very fine. August 21st, the first prize for Clapp's Favorite was awarded to F. & L. Clapp. The first prize for "any other variety" to Horace Eaton, for Rostiezer. August 28th, the first prize for the best collection was given to Charles F. Curtis for Bartlett, Clapp's Favorite, Doyenne Boussock, Tyson, and Rostiezer. September 4th, the first prize for the best dish of pears was awarded for Clapp's Favorite. September 11th, the first prize was also awarded for Clapp's Favorite. This variety has been remarkably fine this season. At the Annual Exhibition, the first prize for the best twenty varieties was awarded to Hovey & Co., whose collection comprised the following varieties: Adams, Andrews, Bartlett, Belle Lucrative, Beurre d'Anjou, Beurre Bosc, Beurre Hardy, Dana's Hovey, Doyenne Boussock, Doyenne du Comice, Howell, Marie Louise, Moore's Pound, Paradis d'Automne, Pratt, Seckel, Sheldon, St. Michel Archange, Swan's Orange, Urbaniste. The other collections were composed of many of the same varieties.

The first prize for the best fifteen varieties was given to John L. DeWolf; for the best ten to C. E. Richardson; for the best five to John McClure. The prizes for single dishes were all awarded. October 9th, the first prize for the best ten varieties was awarded to Hovey & Co., and for the best five varieties to John McClure. For the best single dish to W. T. Andrews, for Beurre Bosc. November 6th, for the best five varieties of winter pears, to Hovey & Co., and for the best single dish to J. H. Fenno, for Beurre d'Anjou.

The Messrs. Clapp, have exhibited many of their seedlings during the season. No. 64, shown April 17th, has been spoken of in another part of this report. October 3d, we had No. 125, a seedling from the Urbaniste; above medium size; roundish turbinate; skin clear yellow, without blush, dotted and traced with thin russet; flesh white, very sugary, moderately juicy; "very good." At the same time, No. 65, was exhibited; above medium size; broad obtuse turbinate; flesh greenish white, fine grained,

melting, buttery, juicy, sprightly, rich, with the Beurre d' Anjou aroma and texture; supposed to be from seed of that variety. October 22d, No. 127, from seed of Urbaniste; quality "best." No. 75 has been described in former reports. No. 22 was shown again this season, and continues to hold its high reputation for quality. November 13th, No. 1, which has been described in former reports, was presented. No. 17 is a new seedling, never before exhibited; believed to be from seed of the Seckel; medium size, color greenish yellow, quality good.

March 2d, 1875, Marshall P. Wilder presented the following seedlings, from B. S. Fox, of San Jose, Cal. No 150½, medium size, roundish turbinate, smooth russet; too far gone to judge of well, but so far as could be tested, sweet and rich, keeping sound at the core. Fox's No. 22; medium size; strongly resembling Beurre d'Aremberg in form, color, calyx, and seeds, and varying like that; flesh sweet with some astringency; rich, fine grained, with some granules around the core; seeds large and plump, cells very large. Fox's seedling, Col. Wilder, large, oval, in size and shape like Beurre d'Anjou, and sometimes (one specimen out of four) elongated like that variety; sweet, but not melting; calyx large, partially open, irregular.

A specimen of British Queen, from Amos Bates, gathered during the Annual Exhibition, was tested October 5th; above medium size; obovate obtuse pyriform; skin clear yellow, nearly covered with thin russet, and reddened toward the sun; flesh white, fine grained, melting, juicy, sprightly and good, but with a little too much astringency.

A coreless pear, from Dr. A. C. Hamlin, Bangor, Me., was brought in October 19th; form oblong, very obtuse and broad at the stem end (oblong obovate); skin dull yellow with a tinge of red towards the sun; flesh pretty white, melting, juicy, sweet and rich; some slight marks of core, but no appearance of a seed; externally it resembles Bonne d'Ezee. Origin unknown, but supposed to be some old variety which has assumed this peculiar condition, and not a seedling, but may be. It is entirely distinct from the Poire Sans Pepins of the French. October 16th, A. J. Dean exhibited a pear called Rogers' Seedling, of fair quality. October 23d, Marshall P. Wilder exhibited a seedling pear, called Lancaster; grown by T. S. Lancaster, of Gloucester; of medium size; in quality could hardly be called good. November 13th, he

also presented his seedlings Mima Wilder and Eddie Wilder, which have been mentioned in former reports, and they were found to retain their previous good quality.

Native Grapes.—We have again to report an unfavorable grape season, and a poor grape crop. September 4th and 11th, the first prize was awarded for Moore's Early. This has proved to be the best early grape shown this season, and retains its previous good reputation. This variety also received the first prize at the Annual Exhibition for any other variety than those named.

The display of native grapes at the Annual Exhibition was as good as last season, but not equal to some previous years. But one of the prizes for the best ten varieties was awarded, and but two for five varieties. For the single dishes most of the first prizes were awarded. The premium for new varieties was not awarded.

N. B. White's seedling, Norfolk Muscat, has improved very much in quality and size of bunch; the bunches shown this year were of good size and well ripened, and if it proves to be hardy, it will be a valuable grape. C. G. Pringle exhibited several seedlings,—a white grape, with small bunch and berry, from seed of Adirondac fertilized with Delaware; a black grape with small sized berry, from seed of Adirondac fertilized with Delaware; a red grape with small bunch and berry, from seed of Creveling fertilized with Delaware, and resembling Diana; also one from seed of Concord fertilized with Delaware; good sized bunch and berry. In the above varieties we could not see any improvement over the old ones, from which they are said to have originated. J. B. Moore's list of seedlings comprised No. 7, a red grape; No. 4, a black grape, medium sized bunch and berry; No. 3, black, small bunch and berry; No. 2, black, good sized bunch and berry; No. 73, black, with large bunch and berry; No. 76, black, medium sized bunch and berry; No. 72, black, with good sized bunch and large berry. Mr. Moore exhibited twelve other seedlings, not named or numbered. In the above list there are some that promise to be valuable, but the past two seasons have been very unfavorable for the grape, and it was thought best only to make a memorandum of all and not pass particular judgment on any, until they had a further trial under more favorable seasons. Mr. Moore has succeeded in originating one valuable seedling, Moore's Early, and out of his long list of seedlings we hope he may be able to find some as good, if not better, than the one named.

J. Fisk Allen had three varieties of seedlings, of the wild red grape parentage; two of the second and one of the third generation; they were all black, with good sized bunch and berry and from fair to good quality, and were considered worthy of further trial. Hovey & Co. exhibited the Cambridge grape, the history of which is as follows: It is a chance seedling found by Francis Houghton, of Somerville, in his garden, some eight or ten years since; it was first fruited by him, seven or eight years ago, and when first exhibited at the room of the Cambridge Horticultural Society the bunches were quite large and very compact; the berry good size and covered with a heavy bloom; quality, much like the Concord; it was about ten days earlier than the Concord; at that time it was considered a valuable seedling.

November 6th, J. Fisk Allen again exhibited his seedling, the Fisk grape. It resembles the Isabella, and at that time was quite ripe and of very fine flavor. H. E. Hooker, of Rochester, N. Y., sent specimens of the Brighton grape for trial; after testing it thoroughly, we think it a grape of fine quality, and if it proves to be hardy, as is claimed, it will be a valuable acquisition. It is a cross between the Concord and Diana Hamburg, and was originated by Jacob Moore, of Brighton, N. Y.

Marshall P. Wilder exhibited the Champion; this is a black grape; medium sized bunch and berry; of good quality; a great bearer and very early, which he thinks will make it quite valuable.

Foreign Grapes.—The show of foreign grapes will compare favorably with those of former seasons. There were some very fine bunches shown June 28th, and the prizes were all awarded, but at the Strawberry Show, July 2d, none of the premiums were awarded. At the Annual Exhibition there was a very good display. E. W. Wood had some very fine bunches in his collection, and his fruit was all well grown and well ripened. George Higginson had some very fine fruit. E. S. Rand, Jr.'s collection was very fine and well grown, considering this was his first crop from young vines. B. G. Smith had a very good collection and some very fine bunches. E. H. Luke also had some very fine fruit in his collection, and would most probably have received one of the prizes had there not been a mistake in naming some of his varieties. George B. Durfee made an excellent display, and in his collection were some fine bunches. D. W. Coit, of Norwich, Conn., had some of the largest bunches on exhibition, one bunch of Syr-

ian weighing four pounds twelve and a half ounces, and a bunch of Palestine, four pounds two and one quarter ounces.

May 22d, Dr. Mason exhibited a very interesting collection of fruit from Col. Dinsmore, Santa Barbara, Cal., comprising lemons, figs, and a citron; May 1st, John Fisk Allen brought a very fine dish of oranges; July 17th, Mrs. J. C. Keating, a dish of the black mulberry; August 7th, E. S. Rand, Jr., a fruiting plant of *Ananassa sativa variegata* (the variegated leaved pine apple), with very beautiful foliage, and fruit of good size and well ripened; August 28th, J. W. Clark and J. C. Hovey, specimens of *Podophyllum peltatum* (mandrake).

At the Annual Exhibition, there were of pears, eight collections of twenty varieties; six of fifteen; eight of ten; ten of five; and of single dishes of Bartlett, nineteen; Seckel, twelve; Sheldon, nine; Beurre d'Anjou and Louise Bonne of Jersey, eight each; Beurre Diel, Belle Lucrative, Beurre Bosc, and Beurre Hardy, seven each; Duchesse, Doyenne Boussock and Winter Nelis, six each; Merriam, Flemish Beauty, Urbaniste, Howell, Beurre Clairgeau, Swan's Orange, and Lawrence, five each; Dana's Hovey, Marie Louise, Paradis d'Automne, and Doyenne du Comice, three each, and Beurre Superfin, two; making, including the collections, six hundred and seventy-nine dishes of pears. There were one hundred and seventy dishes of apples; fifty-four of foreign grapes; ninety-eight of native grapes; forty of peaches; nine of orchard-house peaches; three of nectarines; fifteen of plums, and twenty-three of seedling grapes, comprising in all, one thousand and ninety-one dishes of all varieties of fruit on exhibition. No collections of new fruits were offered for any of the premiums.

Premiums and gratuities have been awarded to one hundred and forty different persons. The annexed list of awards shows the amount of prizes to be $1,290; gratuities, $605; leaving an unexpended balance of $205. The amount of awards exceeds that of last year by $138.

All of which is respectfully submitted.

HERVEY DAVIS,
P. B. HOVEY,
JOHN B. MOORE,
BENJ. G. SMITH,
ALEX. DICKINSON,
D. T. CURTIS.
} *Fruit Committee.*

PRIZES AND GRATUITIES AWARDED FOR FRUITS.

January 24.

Winter Pears.—For the best collection of Winter Pears, the second prize to J. H. Fenno, . . $5 00

Gratuity:—

To J. H. Fenno, for Pears, ... 2 00

March 13.

Gratuity:—

To E. A. Hall, for Winter Nelis Pears, ... 2 00

March 20.

Gratuity:—

To John C. Whitin, for forced Strawberries, . . . 2 00

March 27.

Gratuity:—

To J. H. Fenno, for very fine Josephine de Malines Pears, 2 00

April 3.

Gratuities:—

To R. Oldreive, for Triomphe de Gand Strawberries, . 1 00
A. Dickinson, for Easter Beurre Pears, . . . 2 00
Mrs. C. N. S. Horner, for Roxbury Russet Apples, . 1 00

April 10.

Gratuity:—

To J. W. Talbot, for Black Oxford Apples, . . . 1 00

April 17.

Gratuities:—

To G. N. Noyes, for Hubbardston Apples, . . . 1 00
To F. & L. Clapp, for Seedling Pears, . . . 2 00

April 24.

Gratuity:—

To Franklin Cumins, for Roxbury Russet Apples, . $1 00

May 1.

Gratuity:—

To Edwin Fletcher, for Greening Apples, . . . 1 00
John Fisk Allen, for very fine Oranges, . . . 3 00

May 22.

Gratuity:—

To Dr. Mason, for a collection of California Fruits, . 2 00

June 5.

Gratuity:—

To Charles Garfield, for Strawberries, ... 2 00

June 12.

Gratuity:—

To Charles Garfield, for two Baskets of Strawberries, . 5 00

June 19.

Gratuity:—

To Marshall P. Wilder, for President Wilder Strawberries, ... 2 00

June 19.

Gratuities:—

To J. H. Woodford, for extra fine President Wilder Strawberries, ... 3 00
J. H. Fenno, for Boston Pine Strawberries, . . 1 00
Charles Garfield, for Strawberries, ... 3 00
William C. Childs, for Strawberries, . . . 2 00
John B. Moore, for four baskets of Strawberries, . 5 00

June 26.

Gratuities:—

To J. H. Woodford, for President Wilder Strawberries, 2 00
J. H. Fenno, for collection of Strawberries, . . 2 00
B. G. Smith " " " . . . 2 00

ROSE SHOW.

June 28.

Early Strawberries.—For the best four quarts, to John B. Moore, for Grace,	$10 00
For the second best, to Warren Heustis, for Col. Cheney,	8 00
For the third best, to B. G. Smith, for Lady of the Lake,	6 00
For the best two quarts, to J. B. Moore, for Augusta,	5 00
For the second best, to Charles Garfield, for Fillmore,	4 00
For the third best, to Warren Heustis, for Nicanor,	3 00

June 28.

Foreign Grapes.—For the best three varieties to H. S. Mansfield, for Black Hamburg, Cannon Hall Muscat, and Bowood Muscat,	10 00
For the best two bunches of any variety, to H. S. Mansfield, for Grizzly Frontignan,	5 00
For the second best, to H. S. Mansfield, for White Frontignan,	4 00
For the third best, to H. S. Mansfield, for Black Prince,	3 00
Gratuities:—	
To Charles Garfield, for Strawberries,	4 00
B. G. Smith, " "	3 00
W. G. Prescott, " "	2 00
Marshall P. Wilder, " "	2 00
Wm. C. Childs, " "	2 00
Augustus Parker, " "	2 00
John B. Moore, for collection of Strawberries,	6 00
C. G. Grant, for Cherries,	2 00

STRAWBERRY SHOW.

July 2.

Strawberries.—For the best four quarts of any variety, to Hovey & Co., for Hovey's Seedling,	$15 00

For the second best, to John B. Moore, for Jucunda, $10 00
For the third best, to Warren Heustis, for Col. Cheney, ... 5 00
For the best two varieties, four quarts each, to John B. Moore, for Grace and Hovey's Seedling, . 20 00
For the second best, to B. G. Smith, for President Wilder and Jucunda, ... 15 00
For the third best, to Warren Heustis, for Charles Downing and Jucunda, ... 10 00
For the best four varieties, two quarts each, to John B. Moore, for Champion, Late Prolific, President Wilder, and Triomphe de Gand, ... 15 00
For the second best, to Charles Garfield, for Jucunda, Fillmore, President Wilder, and Triomphe de Gand, ... 10 00
For the third best, to B. G. Smith, for Charles Downing, Triomphe de Gand, Hovey's Seedling, and Lady of the Lake, ... 5 00
For the best collection, not less than six varieties, to B. M. Watson, (twenty-one varieties) . . . 10 00
For the second best, to J. H. Fenno, (six varieties) 8 00
For the best fifty berries, to Warren Heustis, for Col. Cheney, ... 5 00
For the second best, to W. C. Child, for Jucunda, 3 00
For the best two quarts of Agriculturist, to John B. Moore, ... 4 00
For the best Hovey's Seedling, to Hovey & Co., . 4 00
For the best Jucunda, to John B. Moore, . . . 4 00
For the best La Constante, to Hovey & Co., . . 4 00
For the best President Wilder, to W. G. Prescott, . 4 00
For the best Triomphe de Gand, to John B. Moore, . 4 00
For the best Lady of the Lake, to Hovey & Co., . 4 00
For the best Wilson, to James Comley, ... 4 00
For the best Seth Boyden (No. 30), to James Comley, 4 00
For the best Charles Downing, to John B. Moore, . 4 00
For the best Late Prolific, to Hovey & Co., . . 4 00
For the best Champion, to Hovey & Co., . . . 4 00
For the best two quarts of any other variety, to John B. Moore, for Caroline, ... 4 00

Cherries.—For the best four varieties to C. E. Grant,

for Knight's Early Black, Black Tartarian, Black Heart, and Black Eagle, ...	$6 00
For the best two quarts of any variety, to F. R. Shattuck, for Black Tartarian, ...	4 00
For the second best, to I. P. Langworthy, for Knight's Early Black, ...	3 00
For the third best, to B. B. Davis, for Elton, . .	2 00
Gratuities:—	
To Marshall P. Wilder, for Strawberries, . . .	2 00
W. G. Prescott, " "	3 00
G. W. Pierce, " "	2 00
B. G. Smith, " "	1 00
George N. Noyes, " "	1 00
C. E. Grant, " "	1 00
G. F. Stone, " "	2 00
J. R. Fisher, " "	1 00
Horace Eaton, " "	1 00
Horace Partridge, for Cherries, ...	2 00

JULY 3.

Gratuity:	
To J. Fisk Allen, for Oranges and Lemons, . . .	2 00

JULY 10.

CHERRIES.—For the best two quarts, to Phineas J. Stone, for Black Tartarian, ...	4 00
For the second best, to T. M. Davis, for Black Tartarian, ...	3 00
For the third best, to C. E. Grant, for Black Eagle,	2 00
RASPBERRIES.—To B. G. Smith, the second prize for two quarts, for Franconia, ...	3 00
To J. H. Fenno, the third prize, for American Black Cap, ...	2 00
Gratuities:—	
To George N. Noyes, for Strawberries, ...	2 00
Hovey & Co., " "	2 00
E. B. Richardson, " "	1 00
J. H. Fenno, " "	1 00
B. G. Smith, for Jucunda Strawberries, . . .	2 00

To Charles Garfield, for Strawberries and Currants, . $2 00
G. M. Mellen, for Currants, ... 1 00

JULY 17.

CURRANTS.—For the best four quarts of Red Currants, to B. G. Smith, for Versaillaise, ... 4 00
For the second best, to Amos Bates, for Versaillaise, 3 00
For the third best, to J. H. Fenno, for Versaillaise, 2 00
For the best four quarts of White Currants, to Horace Eaton, for Dana's Transparent, ... 3 00
For the second best, to B. G. Smith, for Dana's Transparent, ... 2 00
RASPBERRIES.—For the best two quarts, to William G. Prescott, for Franconia, ... 4 00
For the second best, to Charles Garfield, for Franconia, ... 3 00

Gratuities:—

To Horace Partridge, for Cherries, ... 1 00
W. G. Prescott, " " 1 00
J. E. M. Gilley, " " 3 00
J. H. Fenno, for collection of Cherries, Raspberries, and Gooseberries, ... 3 00
Samuel Hartwell, for Cherries and Currants, . . 1 00
B. B. Davis, for Gooseberries and Cherries, . . 2 00
W. C. Child, for Raspberries, ... 1 00
B. G. Smith, for Yellow Black Caps, . . . 1 00
Mrs. E. M. Gill, for Raspberries, Currants, and Gooseberries, ... 2 00
G. M. Mellen, for Raspberries, Currants, and Gooseberries, ... 2 00
Warren Heustis, for Currants, ... 2 00
W. K. Wood, " " 2 00
Horace Eaton, for Gooseberries, ... 1 00
J. H. Woodford, for Currants and Gooseberries, . . 3 00
C. W. Chamberlain, for Pears, Gooseberries, and Currants, ... 2 00
C. D. Kingman, for forced Peaches, ... 2 00
Mrs. J. C. Keating, for Black Mulberries, . . 1 00

JULY 24.

CURRANTS.—For the best collection, to B. G. Smith, for Versaillaise, Transparent, Dana's New White, and Black Naples,	$5 00
For the second best, to J. H. Fenno, for Transparent, White Grape, Cherry, Red Dutch, and Versaillaise,	3 00
For the best four quarts, to Mrs. E. M. Gill, for Versaillaise,	4 00
For the second best, to B. G. Smith, for Versaillaise,	3 00
For the third best, to Amos Bates, " "	2 00

Gratuities:—

To Warren Heustis, for Doyenne d'Ete Pears,	1 00
J. E. M. Gilley, " " " "	1 00
J. H. Fenno, for collection of Pears, Cherries, Raspberries, and Currants,	4 00
C. E. Grant, for Currants,	1 00
Jacob Todd, " "	1 00
Warren Heustis, for Versaillaise Currants,	2 00
Amos Bates, for collection of Currants,	2 00
Charles Garfield, for Currants and Raspberries,	3 00
John B. Moore, for collection of Raspberries—Clarke, Hornet, Saunders, and Herstine,	5 00
Miss M. B. Tobey, for Raspberries,	1 00
Mrs. E. M. Gill, " "	1 00
J. H. Fenno, for Seedling Cherry (Norfolk),	3 00
G. M. Mellen, for Cherries, Currants, Gooseberries, and Raspberries,	2 00

JULY 31.

GOOSEBERRIES.—For the best two quarts of Native Gooseberries, to B. G. Smith, for Smith's Seedling,	3 00
For the second best, to B. G. Smith, for Downing's Seedling,	2 00
For the best two quarts of Foreign Gooseberries, to B. G. Smith, for Bang-up,	3 00
For the second best, to J. H. Fenno, for Whitesmith,	2 00
BLACKBERRIES.—For the best two quarts of Blackberries, to B. B. Davis, for Dorchester,	5 00

For the second best, to B. G. Smith, for Dorchester, $4 00

Pears.—For the best dish, to J. H. Fenno, for Doyenne d'Ete, ... 4 00

For the second best, to J. E. M. Gilley, for Doyenne d'Ete, ... 3 00

For the third best, to J. H. Fenno, for Beurre Giffard, ... 2 00

Gratuities:—

To George N. Noyes, for Gooseberries, ... 1 00

Amos Bates, for Currants and Gooseberries, . . 3 00

Robert Manning, for Petit Muscat Pears, . . 1 00

Warren Heustis, for Doyenne d'Ete Pears, . . 1 00

Joseph H. Fenno, for collection of Fruit, . . . 2 00

Charles Garfield, " " " " . . . 2 00

Mrs. E. M. Gill, " " " " . . . 2 00

August 7.

Pears.—To J. H. Fenno, the second prize, for collection, 8 00

For the best single dish, to W. S. Janvrin, for Beurre Giffard, ... 4 00

For the second best, to J. H. Fenno, for Beurre Giffard, ... 3 00

For the third best, to B. B. Davis, for Beurre Giffard, ... 2 00

Apples.—For the best dish, to B. B. Davis, for Sweet Bough, ... 4 00

For the second best, to Charles F. Curtis, for Williams, ... 3 00

For the third best, to J. H. Fenno, for Sweet Bough, 2 00

Gratuities:—

To Hovey & Co., for collection of Pears, . . . 4 00

Warren Heustis, for Pears, ... 1 00

C. W. Chamberlain, for Beurre Giffard Pears, . . 1 00

J. H. Fenno, for Pears and Raspberries, . . . 2 00

G. M. Mellen for Blackberries, ... 2 00

B. B. Davis, " " . , . . . 1 00

B. G. Smith, " " 2 00

E. S. Rand, Jr., for Pineapple (*Ananassa sativa variegata*), ... 3 00

To Charles Garfield, for Raspberries, ... $1 00
J. E. M. Gilley, for Apples, ... 2 00
Josiah Newhall, for Roxbury Russet Apples, raised in 1874, ... 1 00

August 14.

Apples.—For the best collection of Early Apples, the second prize, to J. H. Fenno, ... 8 00
For the best Sweet Bough, to B. B. Davis, . . 3 00
For the best Red Astrachan, to Warren Heustis, . 3 00
For the best Williams, to T. M. Davis, . . . 3 00
For the best of any other variety, to T. M. Davis, for Summer Harvey, ... 3 00
Pears.—For the best dish of Pears, to J. C. Park, for Beurre Giffard, ... 4 00
For the second best, to Charles Bird, for Beurre Giffard, ... 3 00
For the third best, to J. H. Fenno, for Beurre Giffard. 2 00

Gratuities:—

To A. S. M'Intosh, for Dorchester Blackberries, . . 1 00
G. M. Mellen, " " " . . 1 00
G. F. Waters, for Blackberries and Pears, . . . 2 00
Charles Bird, for Pears, ... 1 00
C. W. Chamberlain, for Clapp's Favorite Pears, . 1 00
J. H. Fenno, " " " " . 1 00
Mrs. E. M. Gill, " " " " . 1 00
Hovey & Co., " " " " . 1 00
Warren Heustis, for Pears and Apples, . . . 1 00
B. G. Smith, for Foreign Gooseberries, . . . 2 00
J. Cruickshanks, for Moorpark Apricots, . . . 2 00

August 21.

Plums.—For the best dish, to J. H. Fenno, for Washington, ... 4 00
Pears.—For the best Clapp's Favorite, to F. & L. Clapp, ... 4 00
For the second best, to Mrs. E. M. Gill, . . . 3 00
For the third best, to Charles F. Curtis, . . . 2 00

For the best dish of any other variety, to Horace Eaton, for Rostiezer, ... $4 00
For the second best, to J. C. Park, for Beurre Giffard, ... 3 00
For the third best, to J. McClure, for Rostiezer, . 2 00
Peaches.—For the best dish, to John Falconer, for Princess of Wales, ... 5 00
Figs.—For the best dish, to Mrs. Benjamin Fobes, . 3 00

Gratuities:—

To C. W. Chamberlain, for Pears, ... 1 00
M. W. Chadbourne, for Rostiezer Pears, . . . 1 00
George N. Noyes, for Clapp's Favorite Pears, . . 1 00
C. E. Grant, " " " " . . 1 00
Hovey & Co., for collection of Pears, . . . 1 00
Charles F. Curtis, for Williams Apples, . . . 1 00
Asa Clement, " " " . . . 1 00
Warren Heustis, " " " . . . 1 00
Lewis Slack, " " " . . . 1 00
J. H. Fenno, for Apples and Pears, . . . 2 00
John Falconer, for Nectarines, Peaches, and Pears, of orchard-house culture, ... 4 00
John B. Moore, for collection of Fruit, . . . 2 00
G. M. Mellen, " " " " . . . 1 00
J. Cruickshanks, for Moorpark Apricots, . . . 1 00
D. F. Hayes, for Delaware Grapes, ... 1 00

August 28.

Pears.—For the best collection, of not less than five varieties, to C. F. Curtis, ... 8 00
For the second best, to J. H. Fenno, . . . 5 00
For the third best, to Hovey & Co., . . . 4 00
For the best Bartlett, to C. F. Curtis, . . . 4 00
For the second best, to Charles Bird, . . . 3 00
For the third best, to Hovey & Co., . . . 2 00
Peaches.—To J. B. Moore, the third prize, for Yellow and Red Rareripe, ... 3 00
To C. E. Grant, the fourth prize, for Early Crawford, 2 00

Gratuities:—

To J. C. Park, for Tyson Pears,	$1 00
J. A. Morton, for Clapp's Favorite Pears,	1 00
C. E. Grant, " " " "	1 00
J. McClure, for Rostiezer Pears,	2 00
B. G. Smith, for collection of Pears,	2 00
Mrs. E. M. Gill, for Pears,	2 00
D. N. Stowers, " "	1 00
Amos Bates, for collection of Pears and Plums,	3 00
J. T. Foster, for Seedling Peaches,	3 00
J. E. M. Gilley, for Peaches,	1 00
J. H. Fenno, for collection of Fruit,	4 00
G. M. Mellen, " " "	2 00
G. F. Waters, for Blackberries and Pears,	3 00
J. W. Clark, for *Podophyllum peltatum*, (Mandrake),	1 00
J. C. Hovey, " " " "	1 00

SEPTEMBER 4.

NATIVE GRAPES.—For the best dish, to John B. Moore, for Moore's Early,	5 00
APPLES.—For the best dish, to J. H. Fenno, for Gravenstein,	5 00
For the second best, to G. M. Mellen, for Gravenstein,	4 00
For the third best, to G. M. Mellen, for Porter,	3 00
For the fourth best, to Samuel Hartwell, for Porter,	2 00
PEARS.—For the best dish, to F. & L. Clapp, for Clapp's Favorite,	5 00
For the second best, to A. S. M'Intosh, for Tyson,	4 00
For the third best, to J. C. Park, for Clapp's Favorite,	3 00
For the fourth best, to Charles Bird, for Bartlett,	2 00

Gratuities:—

To A. S. M'Intosh, for Tyson Pears,	1 00
Robert Manning, " " "	1 00
John Fillebrown, for Pears,	1 00
J. McClure, " "	1 00
J. Cruickshanks, " "	1 00
Samuel Hartwell, for Pears and Apples,	2 00

To Mrs. S. Joyce, for Pears and Figs, ... $1 00
J. T. Foster, for Seedling Peach (Laura), . . 1 00
C. E. Grant, for Peaches and Pears, . . . 2 00
B. G. Smith, for Chasselas Grapes, ... 2 00
Horace Partridge, for Grapes, ... 1 00
C. D. Kingman, for Grapes and Peaches, orchard-house culture, ... 3 00
Mrs. Draper, for Plums, ... 1 00
Mrs. Benjamin Fobes, for Figs, ... 1 00

SEPTEMBER 11.

APPLES.—For the best dish, to J. H. Fenno, for Gravenstein, ... 5 00
For the second best, to Samuel Hartwell, for Gravenstein, ... 4 00
For the third best, to G. M. Mellen, for Porter, . 3 00
For the fourth best, to G. M. Mellen, for Gravenstein, 2 00
PEARS.—For the best dish, to John Fillebrown, for Clapp's Favorite, ... 5 00
For the second best, to A. S. M'Intosh, for Bartlett, 4 00
For the third best, to J. C. Park, for Bartlett, . 3 00
For the fourth best, to C. E. Grant, for Andrews, . 2 00
PEACHES.—For the best dish, to J. T. Foster, for Foster's Seedling, ... 5 00
For the second best, to J. B. Moore, for Early Crawford, ... 4 00
For the third best, to Samuel Hartwell, for Early Crawford, ... 3 00
For the fourth best, to C. E. Grant, for Early Crawford, ... 2 00
NATIVE GRAPES.—For the best dish of Early Grapes, to John B. Moore, for Moore's Early, . . . 5 00
For the second best, to John B. Moore, for Hartford, 4 00
For the third best, to Charles Garfield, for Creveling, 3 00
For the fourth best, to B. B. Davis, for Hartford, 2 00

Gratuities:—

To M. W. Chadbourne, for Pears, ... 1 00
Mrs. Draper, for Pears, ... 1 00
George N. Noyes, for collection of Pears, . . 2 00

To J. H. Fenno, for Apples and Peaches,	$2 00
J. E. M. Gilley, for Peaches,	1 00
C. D. Kingman, for Grapes and Peaches,	3 00
C. E. Grant, " " " "	2 00
Josiah Pratt, for Plums,	1 00
J. Fisk Allen, for Seedling Grapes and Nectarines,	2 00
G. H. Meacham, for collection of Fruit,	2 00
G. M. Mellen, " " " "	1 00
N. B. White, " " " "	1 00
Josiah Newhall, " " " "	2 00

ANNUAL EXHIBITION.

September 21, 22, and 23.

Apples.—For the best twenty varieties, to F. & L. Clapp,	$25 00
For the second best, to J. H. Fenno,	20 00
For the third best, to Moses Taylor,	15 00
For the best fifteen varieties, to Wm. T. Hall,	15 00
For the best ten varieties, the third prize to Samuel Hartwell,	6 00
For the best five varieties, to S. N. Gaut,	6 00
For the second best, to William A. Crafts,	5 00
For the best Baldwin, to Walter Russell,	3 00
For the second best, to George Hill,	2 00
For the best Gravenstein, to F. & L. Clapp,	3 00
For the second best, to William T. Hall,	2 00
For the best Hubbardston, to Walter Russell,	3 00
For the second best, to G. M. Mellen,	2 00
For the best Northern Spy, to William T. Hall,	3 00
For the second best, to J. H. Fenno,	2 00
For the best Porter, to George Hill,	3 00
For the second best, to George W. Pierce,	2 00
For the best Rhode Island Greening, to J. E. M. Gilley,	3 00
For the second best, to J. H. Fenno,	2 00
For the best Roxbury Russet, to J. L. Bird,	3 00
For the second best, to William A. Crafts,	2 00
For the best Hunt Russet, to Moses Taylor,	3 00
For the second best, to John B. Moore,	2 00

For the best Washington Strawberry, to John C. Park, $3 00
For the second best, to J. H. Fenno, . . . 2 00
For the best King of Tompkins County, to F. & L. Clapp, ... 3 00
For the best Sweet Apples, to J. H. Fenno, for Danvers Winter Sweet, ... 3 00
For the second best, to Samuel Pratt, for Danvers Winter Sweet, ... 2 00
Pears.—For the best twenty varieties, to Hovey & Co., 25 00
For the second best, to A. Dickinson, . . . 20 00
For the third best, to J. H. Fenno, . . . 15 00
For the fourth best, to J. C. Park, ... 10 00
For the best fifteen varieties, to John L. DeWolf, . 15 00
For the second best, to W. S. Jauvrin, . . . 12 00
For the third best, to Charles Bird, . . . 10 00
For the fourth best, to J. L. Bird, ... 8 00
For the best ten varieties, to C. E. Richardson, . . 10 00
For the second best, to Jesse Haley, . . . 8 00
For the third best, to Joseph Cooledge, . . . 6 00
For the fourth best, to William T. Hall, . . . 4 00
For the best five varieties, to John McClure, . . 6 00
For the second best, to C. F. Curtis, . . . 5 00
For the third best, to George S. Curtis, . . . 4 00
For the fourth best, to Augustus Parker, . . 3 00
For the best Bartlett, to John McClure, . . . 3 00
For the second best, to William R. Austin, . . 2 00
For the best Belle Lucrative, to Mrs. H. P. Kendrick, 3 00
For the second best, to Horace Eaton, . . . 2 00
For the best Beurre d'Anjou, to William R. Austin, . 3 00
For the second best, to Mrs. H. P. Kendrick, . . 2 00
For the best Beurre Bosc, to George S. Curtis, . . 3 00
For the second best, to Augustus Parker, . . 2 00
For the best Beurre Hardy, to C. W. Chamberlain, . 3 00
For the second best, to C. F. Curtis, . . . 2 00
For the best Beurre Superfin, to T. M. Davis, . . 3 00
For the second best, to J. H. Fenno, . . . 2 00
For the best Dana's Hovey, to Hovey & Co., . . 3 00
For the second best, to Charles Bird, . . . 2 00
For the best Beurre Clairgeau, to John Fillebrown, . 3 00
For the second best, to C. F. Curtis, . . . 2 00

For the best Doyenne du Comice, to William Maloon, $3 00
For the second best, to W. S. Janvrin, . . . 2 00
For the best Duchesse d'Angouleme, to Mrs. H. P. Kendrick, ... 3 00
For the second best, to John McClure, . . . 2 00
For the best Doyenne Boussock, to Jacob Todd, . 3 00
For the second best, to Joshua Cooledge, . . 2 00
For the best Howell, to Jesse Haley, ... 3 00
For the second best, to Mrs. H. P. Kendrick, . . 2 00
For the best Lawrence, to John McClure, . . . 3 00
For the second best, to William P. Walker, . . 2 00
For the best Louise Bonne of Jersey, to Wm. J. Griggs, 3 00
For the second best, to Mrs. H. P. Kendrick, . 2 00
For the best Marie Louise, to C. W. Chamberlain, . 3 00
For the second best, to Hovey & Co., . . . 2 00
For the best Merriam, to A. S. M'Intosh, . . . 3 00
For the second best, to C. F. Curtis, . . . 2 00
For the best Beurre Diel, to William P. Walker, . 3 00
For the second best, to T. M. Davis, . . . 2 00
For the best Paradis d'Automne, to John L. Bird, . 3 00
For the second best, to Hovey & Co., . . . 2 00
For the best Seckel, to Mrs. H. P. Kendrick, . . 3 00
For the second best, to C. W. Chamberlain, . . 2 00
For the best Sheldon, to John McClure, . . . 3 00
For the second best, to C. F. Curtis, . . . 2 00
For the best Swan's Orange, to Mrs. H. P. Kendrick, 3 00
For the second best, to John McClure, . . . 2 00
For the best Urbaniste, to R. W. Ames, . . . 3 00
For the second best, to Hovey & Co., . . . 2 00
For the best Winter Nelis, to John L. Bird, . . 3 00
For the second best, to William P. Walker, . . 2 00
For the best Flemish Beauty, to William P. Walker, . 3 00
For the second best, to J. H. Fenno, . . . 2 00

Peaches.—For the best collection, the third prize, to John B. Moore, ... 6 00
Fourth prize, to Samuel Hartwell, ... 4 00
For the best single dish, to A. Dickinson, for Early Crawford, ... 4 00
For the second best, to J. T. Foster, for Foster's Seedling, ... 3 00

For the third best, to John L. Bird, for Early Crawford, ... $2 00

Plums.—For the best collection, to Elijah Low, Bangor, Maine, ... 5 00

For the best single dish, to Horace Eaton, for Coe's Golden Drop, ... 3 00

Foreign Grapes.—For the best six varieties, to George B. Durfee, ... 12 00

For the second best, to E. S. Rand, Jr., . . . 10 00

For the third best, to B. G. Smith, ... 8 00

For the best four varieties, to E. W. Wood, . . 8 00

Third prize, to Horace Partridge, ... 4 00

For the best three varieties, to George Higginson, . 6 00

Fourth prize, to Horace Partridge, . . . 3 00

For the best two varieties, to George Higginson, . 5 00

Fourth prize, to C. E. Grant, ... 2 00

Native Grapes.—For the best ten varieties, to Horace Eaton, ... 15 00

For the best five varieties, to John B. Moore, . . 8 00

For the second best, to B. B. Davis, . . . 6 00

For the best Concord, to John B. Moore, . . . 3 00

For the second best, to W. P. Walker, . . . 2 00

For the best Creveling, to Horace Eaton, . . . 3 00

For the second best, to J. C. Park, . . . 2 00

For the best Delaware, to F. & L. Clapp, . . . 3 00

For the second best, to C. E. Grant, . . . 2 00

For the best Diana, to Horace Partridge, . . . 3 00

For the best Hartford, to John B. Moore, . . . 3 00

For the second best, to Horace Eaton, . . . 2 00

For the best Isabella, to J. P. Wellington, . . 3 00

For the best Israella, to Horace Eaton, . . . 3 00

For the best Massasoit, to Horace Eaton, . . . 3 00

For the best Salem, to Horace Eaton, . . . 3 00

For the best Wilder (No. 4), to John B. Moore, . 3 00

For the best of any other variety, to John B. Moore, for Moore's Early, ... 3 00

For the second best, to Horace Eaton, for Agawam (No. 15), ... 2 00

Gratuities for Apples:—

To Samuel Pratt, for collection, ... 2 00

To Joseph Bird, for Baldwin,	$1 00
J. C. Park,	2 00
David B. Flint,	1 00
D. M. Stowers,	2 00
Isaiah F. Arnold, for Crab Apples,	1 00

Gratuities for Pears:—

To James Cruickshanks, for collection,	5 00
J. H. Fenno, " "	5 00
A. T. Brown, " "	4 00
C. N. Brackett, " "	4 00
C. E. Grant, " "	4 00
John B. Moore, " "	4 00
J. E. M. Gilley, " "	3 00
D. B. Flint, " "	3 00
Horace Partridge, " "	3 00
Joseph Bird, " "	3 00
Geo. W. Ireland, " "	3 00
Hovey & Co., " "	2 00
T. M. Davis, " "	2 00
Charles Bird, " "	2 00
G. M. Mellen,	1 00
Lucinda Harris,	1 00
Mason Davis,	1 00
Mrs. Draper,	1 00
Wm. C. Child,	1 00
Samuel Pratt,	1 00
B. F. Hurd,	1 00
John McClure,	1 00
Marshall P. Wilder,	1 00
Mrs. C. D. Hancock,	1 00
S. N. Gaut,	1 00
Joshua Cooledge,	1 00
Horace Eaton,	1 00
W. R. Austin,	1 00
John C. Appleton,	1 00

Gratuities for Foreign Grapes:—

To D. W. Coit, Norwich, Conn., for a fine collection	8 00
Elijah H. Luke, " " "	8 00
George Higginson,	2 00

To B. G. Smith,	$2 00
Augustus Parker, for Victoria Hamburg Grapes,	2 00

Gratuities for Native Grapes:—

To Miss A. C. Wheeler,	1 00
Samuel Pratt,	1 00
Wm. C. Child,	1 00
J. C. Park,	1 00
C. E. Grant,	1 00
J. H. Fenno,	2 00
A. T. Brown,	2 00
Joseph L. Bird,	1 00
Mrs. E. M. Gill,	2 00
N. B. White, for Norwood Muscat Grapes,	2 00
C. C. Pringle, for Seedling Grapes,	2 00

Gratuities for Peaches, Plums, etc.:—

To John Falconer, for a very fine collection of Peaches, orchard-house culture,	10 00
J. H. Fenno, for Seedling Peach,	1 00
Samuel Hartwell, for Early Crawford Peaches,	3 00
J. E. M. Gilley, for collection of Peaches,	2 00
Miss A. C. Wheeler, for Peaches,	1 00
Parker Barnes, " "	1 00
Japhet Sherman, " "	1 00
John B. Moore, " "	1 00
C. E. Grant, " "	1 00
Wm. C. Child, " "	2 00
Miss Annie M. Low, for Plums,	1 00
James MacMahon, " "	1 00
Mrs. Draper, " "	1 00
John Fisk Allen, for Figs,	1 00
Josiah Newhall, " "	1 00
G. F. Waters, for Kittatinny Blackberries,	2 00
John Fisk Allen, for Seedling Nectarine,	2 00
John Falconer, for a very fine collection of Plums and Nectarines, orchard-house culture,	5 00
Mrs. J. E. M. Gilley, for two Baskets of Fruit,	2 00
Miss A. C. Wheeler, for Basket of Fruit,	2 00
Mrs. C. B. Chase, " " " "	2 00
James Cruickshanks, " " " "	1 00

October 2.

Native Grapes.—For the best six bunches, to E. P. Richardson, for Concord,	$4 00
For the second best, to J. H. Fenno, for Delaware,	3 00
For the third best, to C. E. Grant, for Delaware,	2 00
Foreign Grapes.—For the best three varieties, to C. M. Atkinson,	5 00
For the second best, to E. W. Wood,	4 00
For the best two bunches, to E. W. Wood, for Black Hamburg,	3 00
For the second best, to B. G. Smith, for Lady Downes,	2 00
Gratuities:—	
To William C. Child, for Peaches,	3 00
C. E. Grant, " "	1 00
J. H. Fenno, " "	3 00
James Molloy, " "	2 00
C. E. Grant, for Catawba Grapes,	3 00
J. V. Wellington, for a very fine Isabella Grapes,	2 00
Miss A. C. Wheeler, for Grapes,	2 00
Horace Partridge, for collection of Foreign Grapes and Peaches,	3 00
J. S. Whitney, for a very fine collection of Pears,	6 00
F. & L. Clapp, for Seedling Pears,	3 00

October 9.

Autumn Pears.—For the best ten varieties, to Hovey & Co.,	10 00
For the second best, to J. H. Fenno,	5 00
For the third best, to C. E. Grant,	6 00
For the best five varieties, to John McClure,	6 00
For the second best, to W. S. Janvrin,	5 00
For the third best, to Charles Bird,	4 00
For the fourth best, to J. L. Bird,	3 00
For the best single dish, to W. T. Andrews, for Beurre Bosc,	4 00
For the second best, to Eben Snow, for Sheldon,	3 00
For the third best, to G. M. Mellen, for Seckel,	2 00
Autumn Apples.—For the best five varieties, to J. H. Fenno,	6 00

For the second best, to W. T. Hall, . . .	$5 00
For the best single dish, to J. H. Fenno, for Washington Strawberry, ...	4 00
For the second best, to J. H. Fenno, for Gravenstein,	3 00
For the third best, to J. H. Fenno, for Porter, .	2 00
Quinces.—For the best dish of Quinces, to W. S. Janvrin, for Orange, ...	3 00
For the second best, to C. E. Grant, for Orange, .	2 00

Gratuities:—

To Miss Susan E. Dow, for Seckel Pears, . . .	1 00
Joseph Gardner, for Beurre Diel Pears, . . .	1 00
C. H. Brackett, " " " " . . .	1 00
John Capen, for Lawrence Pears, ...	1 00
A. S. M'Intosh, for Beurre d'Anjou Pears, . .	1 00
Lewis Slack, for Pears, ...	3 00
Jacob Todd, " "	1 00
Mrs. Draper, " "	1 00
F. & L. Clapp, for Seedling Pears, ...	3 00
James Cruickshanks, for collection of Pears, . .	3 00
Hovey & Co., " " " " . .	3 00
Timothy Corey, " " " " . .	3 00
J. H. Fenno, " " " " . .	3 00
M. W. Chadbourne, for Apples, ...	1 00
Wm. T. Hall, " "	1 00
George W. Hale, " "	1 00
G. F. Waters, " "	1 00
J. T. Foster, " "	1 00
Wm. C. Child, for Peaches, ...	2 00
Eben Snow, " "	1 00
Josiah Newhall, " "	1 00
John B. Moore, " "	2 00
Mrs. S. Joyce, for Quinces, ...	1 00
Horace Partridge, for Pears, Grapes, and Peaches, .	4 00
J. H. Fenno, for Grapes and Peaches, . . .	2 00
Miss Mary Greenland, for Apples and Peaches, .	1 00
Mrs. E. M. Gill, for Grapes and Pears, . . .	3 00
G. M. Mellen, for Pears and Peaches, . . .	3 00
J. E. M. Gilley, for Apples and Quinces, . . .	1 00

October 16.

Gratuities: —

To A. J. Dean, for Rogers' Seedling Pear,	$1 00
Amos Bates, for British Queen Pear,	1 00
G. M. Mellen, for Beurre Bosc, and a very fine dish of Seckel Pears,	3 00
B. G. Smith, for collection of Foreign Grapes,	3 00
Miss A. C. Wheeler, for Grapes and Pears,	2 00

October 23.

Gratuities:—

To C. E. Grant, for collection of Pears,	2 00
E. C. Sparhawk, for Beurre Diel Pears,	1 00
Rev. I. P. Langworthy, for Pears,	1 00

October 30.

Gratuities:—

To Lewis Slack, for collection of Pears,	3 00
H. M. Young, for Beurre Diel Pears,	1 00
G. M. Mellen, for Apples,	2 00
Mrs. C. N. S. Horner, for Apples and Pears,	1 00

November 6.

Winter Pears.—For the best five varieties, to Hovey & Co.,	6 00
For the second best, to J. H. Fenno,	5 00
For the third best, to John C. Park,	4 00
For the fourth best, to John L. Bird,	3 00
For the best single dish, to J. H. Fenno, for Beurre d'Anjou,	4 00
For the second best, to John L. Bird, for Winter Nelis,	3 00
For the third best, to J. McClure, for Lawrence,	2 00
For the fourth best, to A. S. M'Intosh, for Dana's Hovey,	1 00
Winter Apples.—For the best ten varieties, to J. H. Fenno, the French Plate, valued at	12 00
For the second best, to William T. Hall, the French Plate, valued at	9 00
For the best single dish, to Walter Russell, for Hubbardston,	4 00

For the second best, to William T. Hall, for Baldwin,	$3 00
For the third best, to Josiah Crosby, for Hubbardston,	2 00

Gratuities:—

To Daniel Cross, for Pears,	2 00
J. McClure, " "	1 00
Charles Bird, " "	1 00
A. J. Dean, " "	1 00
James Cruickshanks, for collection of Pears,	3 00
B. G. Smith, " " " "	2 00
C. E. Grant, " " " "	4 00
E. A. Hall, " " " "	2 00
J. H. Fenno, " " " "	3 00
G. M. Mellen, for Apples,	1 00
Moses Taylor, for collection of Apples,	5 00
Mrs. E. M. Gill, for Grapes,	2 00
Miss A. C. Wheeler, for Pears and Grapes,	2 00
Horace Partridge, " " " "	5 00

NOVEMBER 13.

Gratuity:—

To F. & L. Clapp, for Seedling Pears,	2 00

NOVEMBER 20.

Gratuities:—

To B. G. Smith, for a fine dish of Beurre Langelier Pears,	2 00
Miss A. C. Wheeler, for Beurre Diel Pears,	2 00
Hovey & Co., for a very fine dish of Dana's Hovey Pears,	2 00

NOVEMBER 27.

Gratuity:—

To J. H. Fenno, for a very fine dish of Mount Vernon Pears,	2 00

DECEMBER 4.

Gratuity:—

To Miss A. C. Wheeler, for fine Beurre d'Anjou Pears,	2 00

DECEMBER 18.

Gratuities:—

To J. W. Merrill, for very fine Glout Morceau Pears,	$2 00
Robert Manning, for Pears,	2 00
F. & L. Clapp, for Seedling Pears,	2 00

The Society's Silver Medal, was awarded to Dr. Charles C. Hamilton, of Cornwallis, Nova Scotia, for a fine collection of Apples.

The amount awarded to each contributor is as follows:

Allen, John Fisk	$8	Cross, Daniel	$2
Ames, R. W.	3	Cruickshanks, James	16
Andrews, W. T.	4	Cumins, Franklin	1
Appleton, John C.	1	Curtis, Charles F.	31
Arnold, Isaiah F.	1	Curtis, Geo. S.	7
Atkinson, C. M.	5	Davis, B. B.	27
Austin, W. R.	6	Davis, Mason	1
Barnes, Parker	1	Davis, T. M.	16
Bates, Amos	14	Dean, A. J.	2
Bird, Charles	28	DeWolf, John L.	15
Bird, John L.	28	Dickinson, Alex.	26
Bird, Joseph	5	Dorr, Miss Susan	1
Brackett C. N.	4	Draper, Mrs.	5
Brackett, C. H.	1	Durfee, Geo. B.	12
Brown, A. T.	6	Eaton, Horace	46
Capen, John	1	Falconer, John	24
Chadbourne, M. W.	3	Fenno, J. H.	217
Chamberlain, C. W.	13	Fillebrown, John	9
Chase, Mrs. C. B.	2	Fisher, J. R.	1
Child, Wm. C.	17	Fletcher, Edwin	1
Clapp, F. & L.	67	Flint, D. B.	4
Clark, J. W.	1	Fobes, Mrs. B.	4
Clement, Asa	1	Foster, J. T.	13
Coit, D. W.	8	Gardner, Joseph	1
Comley, James	8	Garfield, Charles	42
Cooledge, Joshua,	9	Gill, Mrs. E. M.	22
Corey, Timothy	3	Gaut, S. N.	7
Crafts, Wm. A.	7	Gilley, J. E. M.	22
Crosby, Josiah	2	Gilley, Mrs. J. E. M.	2

Grant, C. E.	$54	Noyes, G. N.	$8
Greenland, Miss Mary,	1	Oldreive, R.	1
Griggs, Wm. J.	3	Park, John C.	36
Haley, Jesse	11	Parker, Augustus	9
Hall, George W.	1	Partridge, Horace	30
Hall, E. A.	4	Pierce, G. W.	4
Hall, Wm. T.	42	Pratt, Josiah	1
Hancock, Mrs. C. D.	1	Pratt, Samuel	6
Harris, Lucinda	1	Prescott, Wm. G.	14
Hartwell, Samuel	25	Pringle, C. G.	2
Hayes, D. F.	1	Rand, E. S. Jr.	13
Heustis, Warren	43	Richardson, C. E.	10
Higginson, George	13	Richardson, E. P.	5
Hill, George	5	Russell, Walter	10
Horner, Mrs. C. N. S.	2	Shattuck, F. R.	4
Hovey & Co.	106	Sherman, Japhet	1
Hovey, J. C.	1	Slack, Lewis	7
Hunt, B. F.	1	Smith, B. G.	91
Ireland, Geo. W.	3	Snow, Eben	4
Janvrin, W. S.	26	Sparhawk, E. C.	1
Joyce, Mrs. S.	2	Stevens, George W.	2
Keating, J. C.	1	Stone, G. F.	2
Kendrick, Mrs. H. P.	18	Stone, Phineas J.	4
Kingman, C. D.	8	Stowers, D. W.	3
Langworthy, I. P.	4	Talbot, J. W.	1
Low, Miss Annie M.	1	Taylor, Moses	23
Low, Elijah	5	Tobey, Miss M. B.	1
Luke, Elijah H.	8	Todd, Jacob	5
Maloon, Wm.	3	Walker, Wm. P.	12
Manning, Robert	4	Waters, G. F.	8
Mansfield, H. S.	22	Watson, B. M.	10
Mason, Dr.	2	Wellington, J. V.	5
McClure, J.	34	Wheeler, Miss A. C.	14
McMahon, James	4	White, N. B.	3
Meacham, Giles H.	2	Whitin, John C.	2
Mellen, G. M.	41	Whitney, J. S.	6
Merrill, J. W.	2	Wilder, Marshall P.	7
M'Intosh, A. S.	15	Wood, E. W.	15
Molloy, James	2	Wood, W. K.	2
Moore, John B.	157	Woodford, J. H.	8
Morton, J. A.	1	Young, H. M.	1
Newhall, Josiah	5		

Amount of Appropriation		$2,100
Prizes awarded	$1,290	
Gratuities awarded	605	1,895
Balance not awarded		$205

REPORT

OF THE

COMMITTEE ON VEGETABLES,

FOR THE YEAR 1875.

By C. N. BRACKETT, Chairman.

The past year has, in many respects, been one of more than ordinary interest in this department of the Society. At the weekly exhibitions an encouraging degree of interest has been manifested throughout the season; our shows have been sustained with spirit and success, and have been considered superior, in some respects, to those of any previous year.

Competition for the prizes offered by the Society has been active throughout the year, and the efforts of cultivators have resulted in placing upon our tables products of their skill, which for beauty and quality are rarely equalled in the most favorable seasons.

Each year has its peculiarities, and the past has been no exception to the general rule. The extreme and long continued cold weather, experienced during the early portion of the year, operated unfavorably for our winter and early spring shows, so that from the commencement of the year, up to the Azalea Exhibition in April, the contributions of forced vegetables were made only in limited quantity.

During the month of January, Mrs. E. M. Gill and George F. Stone showed some very fair samples of Tennisball Lettuce, which were the only contributions offered throughout the month.

February 27th, S. W. Twombly & Son exhibited Dandelions. March 6th, S. H. Scott, very fine White Spine Cucumbers, the first of the season. March 20th and 27th, excellent specimens of Lettuce were shown by Josiah Crosby; Sea Kale and Rhubarb, by W. Gage, and specimens of Swiss Chard by C. M. Atkinson. April 3d, Walter Russell presented samples of Long Scarlet

Radishes and Tennisball Lettuce, which were the finest and best grown specimens shown up to that date. S. W. Twombly & Son also exhibited specimens of Jersey Hybrid Cucumbers.

The above includes all the exhibitions made in this department previous to the Azalea Exhibition, April 10th, at which time, owing to an unfavorable and very backward season, the show of forced vegetables was somewhat limited; such specimens as were presented, however, were considered superior, and maintained their accustomed standard of excellence.

On the 5th of June, occurred one of the largest and best of our weekly exhibitions during the year. The display of Asparagus by J. B. Moore, Walter Russell, and Samuel Hartwell, and the very fine collections of Lettuce, Radishes, Cucumbers, etc., by Messrs. Fillebrown, Chamberlain, Russell, Crosby, Marshall P. Wilder, and others, were worthy of special mention. Some remarkably fine specimens of Victoria Rhubarb were also shown by Alexander Dickinson. From this date throughout the season, and especially at the Annual Exhibition, the displays of the different varieties of vegetables were extensive and of excellent quality.

June 26th, C. D. Kingman showed specimens of the new potato, Alpha, introduced last year by B. K. Bliss & Sons, and described in our last report. It was also shown at the Annual Exhibition by the originator, C. G. Pringle, whose specimens were exceedingly fine, and considerably improved in size, as compared with the specimens shown last season.

At the Rose and Strawberry Shows, June 28th and July 2d, the exhibitions of Peas were unusually fine, and consisted of several varieties which were new. They were shown by Joseph Tailby, Charles Garfield, and W. C. Child. Those shown by Mr. Tailby were William 1st, Emerald Gem, and Carter's Extra Early Gem. The pods of the variety known as William 1st, were large, plump, and well filled; this variety was the earliest shown, and was exhibited by Mr. Tailby June 26th, and again at the Strawberry Show, when it was awarded the first prize for the best peck. The varieties shown by Mr. Garfield were McLean's Best of All, Duchess of Edinburgh, and Sutton's Giant Emerald, the last variety being particularly fine. Later in the season W. H. Spooner also exhibited the following collection: Laxton's Superlative, G. F. Wilson, Laxton's Fillbasket, and Omega.

Every year there are sent out a host of fancy varieties, many of

which are of delicious flavor, but generally only moderate bearers, and very high priced. Occasionally a really valuable acquisition is made, but in general new varieties should receive the cautious attention of the common cultivator, whose object is to obtain a profitable and certain crop.

June 24th, and on other occasions during the season, C. D. Kingman exhibited very handsome specimens of Hathaway's Excelsior Tomato, a medium sized, uniformly round, smooth variety, with fruit growing in clusters. Mr. Kingman informed your Committee, that after having tried many of the leading varieties, he considers this the best of all. Some of our best market gardeners, however, consider it to be too small for a profitable market variety, but, on account of its other excellent qualities, recommend it as a valuable variety for the amateur kitchen garden.

A new tomato was shown during the weekly exhibitions of the season, and also at the Annual Show, by John Fillebrown, called the Emery, which, after growing for the past two seasons, he considers a better and more profitable variety than the Boston Market. Your Committee were all favorably impressed with its appearance. It certainly possesses many remarkably excellent properties, and it will no doubt be thoroughly tested the coming season, in order to determine whether it can successfully compete with a variety so firmly established in the estimation of the public as the Boston Market, which has for a long period been the favorite with market gardeners in this vicinity. Mr. Fillebrown, who introduced the Emery, is an experienced cultivator, and a careful observer, and his recommendation may safely be considered as an assurance that we may hope for something of permanent value from this new and promising variety.

September 4th, N. B. White, of Norwood, Mass., exhibited specimens of a new seedling tomato originating with him, with fruit of a dull pink color, and foliage like the Keyes.

At the same exhibition, Benj. G. Smith presented fine specimens of Dreer's Improved Lima Bean. It is claimed for this variety, that its distinctive features are early maturity, productiveness, and extra quality. The specimens shown by Mr. Smith were exceedingly fine.

For much of the interest attending the weekly exhibitions, especially in the earlier part of the season, the Society is under

obligations to Josiah Crosby, Walter Russell, John Fillebrown, George W. Pierce, and George F. Stone, who have shown fine specimens of forced vegetables, in large quantities and great variety. Messrs. Garfield, Mellen, Child, and others who might be mentioned, have been large contributors, and have placed upon our tables, from time to time, many objects of superior quality. So numerous and excellent have been the specimens exhibited in competition for the prizes, that the Committee have in some instances been embarrassed in making their awards. On several occasions during the season, specimens have been presented so nearly equal in size, beauty, and quality, that the Committee found it not always an easy task to decide which were best. They have, however, in all cases strenuously endeavored to do exact justice to the different competitors in making their awards; and if they have, in any case, failed in this respect, they can only say that they have acted according to their best judgment, and have been unanimous in opinion. Your Committee regret that in one or two instances they have been obliged to disqualify otherwise worthy contributions (which would have received the first prize) for containing more than the number of specimens called for in the schedule. It was undoubtedly an oversight, but the rule on this subject being imperative, the Committee were obliged to enforce it.

The Annual Exhibition was in all respects a good one. The display of vegetables was fully up in quantity, while many of the objects shown have more nearly approached perfection than heretofore. In some instances, however, the exhibitor has made the mistake of exposing his largest specimens, without regard to form or quality. The rage for overgrown beets and mammoth squashes it is hoped has gone by; they are always coarse-grained and watery, only fit for stock feeding. Quickly grown, medium sized, clean and smooth specimens are far preferable for the table, or for taking a prize at a horticultural exhibition, and your Committee would intimate to contributors that in making their awards, they will regard the above requisites as of more importance than great size.

The display of potatoes at the annual exhibition was remarkably fine, Samuel Hartwell showing the largest collection and greatest number of varieties. Very fine collections were also exhibited by Mrs. M. T. Goddard, G. W. Pierce, C. G. Pringle, Walter Russell, John L. De Wolf and S. A. Merrill. In the collection of E.

S. Brownell, of Vermont, were several new varieties, three years from the seed ball, which he considers quite promising, and which were on exhibition for the first time. These seedlings Mr. Brownell proposes to test another year before giving them to the public. He has also entered his seedling, Seek-no-further, for the Society's prospective prize of thirty dollars offered for the best seedling late potato, after a public trial of three years. The evident attention paid to the cultivation and improvement of the potato is entitled to the highest commendation, and should receive the encouragement of the Society.

At the Annual Exhibition, S. A. Merrill, was, as usual, the largest contributor. The collection of John Cummings formed a prominent feature of the exhibition, and was acknowledged by all who saw it to be one of remarkable excellence. Many other fine collections might be particularized at this exhibition, but it would make our report too long, and we would refer you to the annexed list of prizes awarded by your committee, which will designate the successful competitors.

Respectfully submitted by

C. N. Brackett,
George W. Pierce,
Josiah Crosby,
Walter Russell,
George Hill,
John Fillebrown,
Anthony Hatch,

Vegetable Committee.

PRIZES AND GRATUITIES FOR VEGETABLES.

DECEMBER 26, 1874.

Gratuity:—

To Mrs. E. M. Gill, for Lettuce, ... $1 00

JANUARY 2, 1875.

Gratuity:—

To Mrs. E. M. Gill, for Lettuce, ... 2 00

JANUARY 23.

Gratuity:—

To G. F. Stone, for Lettuce, ... 1 00

FEBRUARY 27.

Gratuity:—

To S. W. Twombly & Son, for Dandelions, . . . 1 00

MARCH 6.

Gratuity:—

To S. H. Scott, for Cucumbers, ... 3 00

MARCH 20.

Gratuity:—

To Josiah Crosby, for Lettuce, ... 3 00

MARCH 27.

Gratuities:—

To Josiah Crosby, for Lettuce, ... 2 00
W. Gage, for Rhubarb and Kale, ... 4 00

APRIL 3.

Gratuities:—

To Walter Russell, for Lettuce, ... 3 00
" " " Radishes, ... 2 00
C. N. Brackett, for Tennisball Lettuce, . . . 1 00
S. W. Twombly & Son, for Cucumbers, . . . 3 00

AZALEA EXHIBITION.

April 10.

LETTUCE.—For the best four heads of Tennisball, to Walter Russell, ... $4 00
For the second best, to Josiah Crosby, . . . 3 00
RADISHES.—For the best four bunches of Turnip Rooted, to Josiah Crosby, ... 4 00
For the second best, to W. Russell, . . . 3 00
For the best four bunches of Long Scarlet, to J. Crosby, ... 4 00

Gratuity:—

To A. S. M'Intosh, for Artichokes, ... 1 00

April 17.

Gratuities:—

To G. F. Stone, for collection of Lettuce, . . . 4 00
W. Russell, for Lettuce, ... 1 00
W. D. Philbrick, for Lettuce, ... 1 00

May 1.

Gratuities:—

To George F. Stone, for Lettuce, ... 3 00
G. W. Pierce, " " 2 00
C. M. Atkinson, for Parsley in pots, . . . 2 00

May 8.

Gratuities:—

To G. M. Mellen, for Lettuce, ... 1 00
C. N. Brackett, " " 2 00
Marshall P. Wilder, for Tomatoes, ... 2 00

May 15.

Gratuities:—

To Walter Russell, for collection, ... 3 00
Josiah Crosby, " " 2 00
Marshall P. Wilder, for Sion House Improved Cucumbers, ... 2 00
G. M. Mellen, for Lettuce, ... 1 00

MAY 22.

Gratuities:—

To B. G. Smith, for Asparagus,	$1 00
Marshall P. Wilder, for Cucumbers,	1 00

MAY 29.

Gratuity:—

To John B. Moore, for Asparagus,	2 00

JUNE 5.

ASPARAGUS.—For the best four bunches, twelve stalks each, to John B. Moore,	4 00
For the second best, to Walter Russell,	3 00
For the third best, to Samuel Hartwell,	2 00
CUCUMBERS.—For the best pair, grown under glass, to John Fillebrown,	4 00
For the second best, to C. W. Chamberlain,	3 00
For the third best, to W. Russell,	2 00
RHUBARB.—For the best twelve stalks, to Alexander Dickinson,	4 00
For the second best, to S. Hartwell,	3 00
For the third best, to George M. Mellen,	2 00
RADISHES.—For the best four bunches of Long Scarlet, to W. Russell,	4 00
For the second best, to Josiah Crosby,	3 00
For the best four bunches of Turnip Rooted, to W. Russell,	4 00
For the second best, to W. Russell, for Intermediate,	3 00
LETTUCE.—For the best four heads, to Josiah Crosby,	4 00
For the second best, to C. W. Chamberlain,	3 00
For the best four heads of Boston Curled, to C. W. Chamberlain,	4 00
For the second best, to Josiah Crosby,	3 00
CARROTS.—For the best twelve specimens of Short Scarlet, to Josiah Crosby,	4 00

Gratuity:—

To Marshall P. Wilder, for Sion House Cucumbers,	2 00

JUNE 12.

Gratuities:—

To —— Parker, for Tomatoes, ... $1 00
Charles Garfield, for Egyptian Beets, . . . 1 00

JUNE 26.

Gratuities:—

To Josiah Crosby, for collection, ... 5 00
J. Tailby, for William the First Peas, . . . 2 00
C. D. Kingman, for Alpha Potatoes, . . . 2 00

JUNE 28.

Gratuities:—

To W. C. Child, for Caractacus Peas, ... 2 00
G. M. Mellen, " " " 1 00
Joseph Tailby, for Emerald Gem Peas, . . . 2 00
Josiah Crosby, for collection, ... 6 00
Marshall P. Wilder, for Cucumbers, . . . 2 00

JULY 2.

PEAS.—For the best peck, to Joseph Tailby, for William the First, ... 4 00
For the second best, to Charles Garfield, . . 3 00
For the third best, to M. W. Chadbourne, . . 2 00
BEETS.—For the best summer, Turnip Rooted, twelve specimens, to Josiah Crosby, for Deering, . . 4 00
For the best Egyptian, twelve specimens, to Charles Garfield, ... 4 00
For the second best, to Josiah Crosby, . . . 3 00
For the third best, to George W. Pierce, . . . 2 00
CUCUMBERS.—For the best pair of White Spine, to J. Crosby, ... 4 00
For the second best, to G. W. Pierce, . . . 3 00
For the third best, to C. W. Chamberlain, . . 2 00
LETTUCE.—For the best four heads, of any variety, to G. W. Pierce, for Tennisball, ... 4 00
For the second best, to G. W. Pierce, for Cabbage, . 3 00
For the third best, to G. F. Stone, for Tennisball, . 2 00
CARROTS.—For the best twelve specimens of Short Scarlet, to Josiah Crosby, ... 4 00

ONIONS.—For the best twelve specimens, to J. Crosby, . $4 00
For the second best, to C. W. Chamberlain, . . 2 00

Gratuities:—

To W. C. Child, for Peas, ... 2 00
C. W. Chamberlain, for Advancer Peas, . . . 2 00
Joseph Tailby, for Carter's Extra Early Peas, . . 2 00
G. M. Mellen, " collection of Peas, . . . 2 00
Josiah Crosby, " Radishes, ... 2 00
G. W. Pierce, " Rhubarb, ... 2 00

JULY 10.

CRANBERRY BEANS.—For the best peck, to Walter Russell, ... 4 00
SQUASHES.—For the best Long Warted Summer, four specimens, to Walter Russell, ... 3 00
PEAS.—For the best peck, of any variety, to C. W. Chamberlain, ... 4 00
For the second best, to G. M. Mellen, . . . 3 00
For the third best, to W. C. Child, ... 2 00
ONIONS.—For the best twelve specimens, to C. W. Chamberlain, ... 4 00
POTATOES.—For the best peck, of any variety, to C. D. Kingman, ... 4 00
For the second best, to C. W. Chamberlain, . . 3 00
CABBAGES.—For the best four, to Walter Russell, . . 4 00

Gratuities:—

To C. W. Chamberlain, for collection, ... 2 00
Walter Russell, " " 2 00
W. H. Spooner, " " of Peas, . . 2 00
Miss A. C. Wheeler, for Beans, ... 1 00
C. D. Kingman, for Wax Beans, ... 2 00

JULY 17.

TOMATOES.—For the best twelve specimens, to C. D. Kingman, ... 4 00
For the second best, to G. W. Pierce, . . . 3 00

Gratuities:—

To M. R. Rollins, for Cos Lettuce, ... 1 00

To Charles Garfield, for collection of Peas, . . . $2 00
W. H. Spooner, " " " . . . 2 00
Miss A. C. Wheeler, for collection of Beans, . . 1 00
Samuel Hartwell, for Peas, ... 1 00
W. C. Child, for Marrowfat Peas, ... 1 00
Mrs. E. M. Gill, for Dwarf Beans, ... 1 00

JULY 24.

SQUASHES.—For the best four Marrow, to Josiah Crosby, 4 00
CABBAGES.—For the best four Drumhead, to Walter Russell, ... 4 00
BEANS.—For the best peck of Dwarf Horticultural, to Mrs. E. M. Gill, ... 4 00
TOMATOES.—For the best twelve specimens, to C. D. Kingman, ... 4 00
For the second best, to Walter Russell, . . . 3 00
For the third best, to C. D. Kingman, for Gen. Grant, 2 00

Gratuities:—

To Josiah Crosby, for collection, ... 4 00
Miss A. C. Wheeler, for collection, ... 1 00
W. H. Spooner, for Omega Peas, ... 1 00
J. H. Woodford, for Pole Wax Beans, . . . 1 00
W. C. Child, for Sweet Corn, ... 1 00

JULY 31.

TOMATOES.—For the best twelve specimens, to C. N. Brackett, ... 4 00
For the second best, to G. W. Pierce, . . . 3 00
For the third best, to George Hill, ... 2 00
For the fourth best, to C. D. Kingman, . . . 1 00
TURNIPS.—For the best Flat, twelve specimens, to Anthony Hatch, ... 4 00
CORN.—For the best Sweet, twelve ears, to George Hill, 4 00
For the second best, to W. C. Child, . . . 3 00
For the third best, to C. E. Grant, . . . 2 00
EGG PLANT.—For the best Black Pekin, four specimens, to George Hill, ... 4 00
For the second best, to Josiah Crosby, . . . 3 00

Gratuities:—

To Charles Garfield, for collection,	$2 00
C. N. Brackett, " "	2 00
G. M. Mellen, " "	1 00
Joseph Tailby, for Wax Beans,	1 00

AUGUST 7.

SWEET CORN.—For the best twelve ears of Early Crosby, to Walter Russell,	4 00
For the second best, to Samuel Hartwell,	3 00
For the third best, to George Hill,	2 00
For the best twelve ears of Early Concord, to C. E. Grant,	4 00
SQUASHES.—For the best four Marrow, to Josiah Crosby,	4 00
TOMATOES.—For the best twelve specimens of Gen. Grant, to C. N. Brackett,	4 00
For the second best, to G. M. Mellen,	3 00
For the best twelve specimens of Boston Market, to George Hill,	4 00
For the second best, to Walter Russell,	3 00
For the third best, to C. E. Grant,	2 00

Gratuities:—

To W. C. Child, for collection,	2 00
G. M. Mellen, for Potatoes,	1 00
C. N. Brackett, for Crosby Corn,	1 00
Walter Russell, for Pekin Egg Plant,	2 00

AUGUST 14.

EGG PLANT.—For the best Black Pekin, four specimens, to Josiah Crosby,	4 00
For the second best, to George Hill,	3 00
For the third best, to C. M. Atkinson,	2 00
For the best Large Round Purple, to J. Crosby,	4 00
For the second best, to George Hill,	3 00
MELONS.—For the best Greenflesh, four specimens, to Josiah Crosby,	4 00
TOMATOES.—For the best twelve, of any variety, to C. N. Brackett,	4 00
For the second best, to G. W. Pierce,	3 00
For the third best, to G. M. Mellen,	2 00

Gratuities:—

To Charles Garfield, for collection, ... $1 00
C. E. Grant, " " 3 00
George W. Pierce, " " 2 00
C. N. Brackett, " " 2 00
Walter Russell, " " 5 00
Carter, Dunnett & Beale, London, for collection of Red and White Onions, ... 2 00
W. C. Child, for Sieva Beans, ... 1 00
J. Tailby, for Hybrid Cucumbers, No. 2, and Snowflake Potatoes, ... 2 00

AUGUST 21.

MELONS.—For the best Greenflesh, of any variety, four specimens, to Walter Russell, ... 4 00
For the second best, to George Hill, . . . 3 00
For the third best, to Josiah Crosby, . . . 2 00
MUSKMELONS.—For the best four specimens, to George W. Pierce, ... 4 00
EGG PLANTS.—For the best Large Round Purple, four specimens, to Walter Russell, ... 4 00
For the second best, to George Hill, . . . 3 00
For the third best, to Josiah Crosby, . . . 2 00
For the best Black Pekin, four specimens, to George W. Pierce, ... 4 00
For the second best, to Josiah Crosby, . . . 3 00
For the third best, to George Hill, ... 2 00

Gratuities:—

To Charles Garfield, for collection, ... 3 00
A. A. Pope, " " 2 00
G. M. Mellen, " " 2 00
C. N. Brackett, " " 1 00
B. G. Smith, for Lima Beans, ... 2 00
W. C. Child, " " " 1 00
J. Tailby, for Hybrid Cucumbers, No. 2, . . . 1 00
Peter Fottler, for Brunswick Cabbage, . . . 1 00
M. W. Chadbourne, for Sweet Corn, ... 1 00
Walter Russell, for Crosby Corn, ... 1 00
C. E. Grant, for Concord Corn, ... 1 00
J. B. Moore, for collection of Tomatoes, . . . 1 00
G. W. Pierce, for Texan Egg Plant, . . . 2 00

AUGUST 28.

POTATOES.—For the best peck, of any variety, to Walter Russell,	$4 00
For the second best, to Charles Garfield,	3 00
For the third best, to G. M. Mellen,	2 00
BEANS.—For the best two quarts of Small Lima or Sieva, to B. G. Smith,	4 00
For the second best, to C. Garfield,	3 00
For the third best, to W. C. Child,	2 00
PEPPERS.—For the best twelve specimens, to G. W. Pierce,	4 00
For the second best, to Josiah Crosby,	3 00
For the third best, to C. N. Brackett,	2 00
Gratuities:—	
To Walter Russell, for collection,	2 00
G. M. Mellen, " "	1 00
George W. Pierce, for Greenflesh Melons,	2 00
J. C. Park, for Burr's Corn,	1 00
W. C. Child, for Mammoth Corn,	1 00
Charles Garfield, for collection of Tomatoes,	1 00
W. C. Child, for Lima Beans,	1 00

SEPTEMBER 4.

BEANS.—For the best two quarts of Large Lima, to Benjamin G. Smith,	4 00
For the second best, to George Hill,	3 00
For the third best, to Charles Garfield,	2 00
WATERMELONS.—For the best pair, to M. W. Chadbourne,	4 00
For the second best, to Samuel Hartwell,	3 00
For the third best, to " "	2 00
CELERY.—For the best four roots, to Josiah Crosby,	4 00
For the second best, to John Fillebrown,	3 00
For the third best, to George Hill,	2 00
PEPPERS.—For the best twelve specimens, to Anthony Hatch,	4 00
For the second best, to C. N. Brackett,	3 00
For the third best, to Josiah Crosby,	2 00
Gratuities:—	
To B. G. Smith, for Dreer's Improved Lima Bean,	1 00
Charles Garfield, for collection,	1 00

To Walter Russell, for Lima Beans, ... $1 00
Mrs. E. M. Gill, " " " 1 00
C. E. Grant, " " " 1 00
Anthony Hatch, for Okra, ... 1 00
Sam'l Hartwell, for Burr's Corn, ... 1 00
C. E. Grant, " " " 1 00
J. B. Tilley, " " " 1 00
G. N. Noyes, for Corn, ... 1 00
J. B. Moore, for Cauliflowers, ... 2 00
G. W. Pierce, for Melons, ... 2 00
John Fillebrown, for Melons, ... 1 00
N. B. White, for New Seedling Tomato, . . . 2 00
W. H. Spooner, for Green Gage Tomato, . . . 1 00

SEPTEMBER 11.

CELERY.—For the best four roots, to Josiah Crosby, . 4 00
For the second best, to John Fillebrown, . . 3 00
MELONS.—For the best Greenflesh, three specimens, to Joshua Cooledge, ... 4 00
For the second best, to G. W. Pierce, . . . 3 00
For the third best, to John Fillebrown, . . . 2 00
SALSIFY.—For the best twelve specimens, to Josiah Crosby, 4 00

Gratuities:—

To Charles Garfield, for collection, ... 2 00
C. E. Grant, " " 2 00
Samuel Hartwell, for Sweet Corn, ... 1 00
George N. Noyes, " " " 1 00
M. W. Chadbourne, for Watermelons, . . . 2 00

ANNUAL EXHIBITION.

SEPTEMBER 21, 22, AND 23.

Special Prize.

CELERY.—For the best four roots, to John Fillebrown, . 8 00
For the second best, to Josiah Crosby, . . . 5 00

BEETS.—For the best Turnip Rooted, twelve specimens, to G. F. Stone, ... 4 00

For the second best, to Walter Russell, . . . $3 00
For the third best, to John Fillebrown, . . . 2 00
For the best Long Blood, twelve specimens, to Josiah Crosby, ... 4 00
For the second best, to S. A. Merrill, . . . 3 00
For the third best, to A. T. Brown, . . . 2 00
Carrots.—For the best Early Horn, twelve specimens, to Walter Russell, ... 4 00
For the second best, to Anthony Hatch, . . 3 00
For the third best, to G. W. Pierce, . . . 2 00
For the best Long Orange, twelve specimens, to J. Fillebrown, ... 4 00
For the second best, to Warren Rawson, . . 3 00
For the third best, to Josiah Crosby, . . . 2 00
For the best Intermediate, twelve specimens, to Walter Russell, ... 4 00
For the second best. to G. W. Pierce, . . . 3 00
For the third best, to Mrs. M. T. Goddard, . . 2 00
Corn.—For the best Sweet, twelve specimens, to George N. Noyes, ... 4 00
For the second best, to John Cummings, . . 3 00
For the third best, to John B. Moore, . . . 2 00
For the best Burr's, twelve specimens, to Charles Garfield, ... 4 00
For the second best, to C. E. Grant, . . . 3 00
For the third best, to A. T. Brown, . . . 2 00
For the best Yellow or Field, twenty-five ears, traced, to Mrs. M. T. Goddard, ... 4 00
For the second best, to D. F. Hayes, . . . 3 00
For the third best, to Josiah Newhall, . . . 2 00
Cauliflowers.—For the best four specimens, to John B. Moore, ... 4 00
Brussells Sprouts.—For the best two quarts, to Mrs. M. T. Goddard, ... 4 00
For the second best, to Anthony Hatch, . . . 3 00
Celery.—For the best four roots, to John Fillebrown, . 4 00
For the second best, to Josiah Crosby, . . . 3 00
For the third best, to Warren Rawson, . . . 2 00
Tomatoes.—For the best three varieties, twelve specimens each, to John Cummings, ... 5 00

For the second best, to G. W. Pierce, . . .	$4 00
For the third best, to S. A. Merrill, . . .	3 00
For the best single dish, twelve specimens, of Boston Market, to Walter Russell, ...	3 00
For the best single dish, twelve specimens, of Arlington, to A. T. Brown, ...	3 00
For the best single dish, twelve specimens, of Canada Victor, to J. J. H. Gregory, ...	3 00
For the best single dish, twelve specimens, of any other sort, to J. J. H. Gregory, for Paragon, .	3 00
For the best single dish, twenty-four specimens, of any variety, to C. N. Brackett, for Gen. Grant, . .	4 00
For the second best, to J. Fillebrown, for Emery, .	3 00
For the third best, to A. Dickinson, for Boston Market, ...	2 00
Okra.—For the best twenty-four specimens, to Mrs. M. T. Goddard, ...	4 00
For the second best, to Anthony Hatch, . . .	3 00
Martynias.—For the best twenty-four specimens, to Anthony Hatch, ...	4 00
For the second best, to G. W. Pierce, . . .	3 00
Cranberries.—For the best half-peck, to W. G. Prescott,	4 00
For the second best, to C. N. Brackett, . . .	3 00
Melons.—For the best Greenflesh, three specimens, to George W. Pierce, ...	4 00
For the second best, to S. A. Merrill, . . .	3 00
For the third best, to John Fillebrown, . . .	2 00
Muskmelons.—For the best three specimens, to S. A. Merrill, ...	4 00
For the second best, to Josiah Newhall, . . .	3 00
Watermelons.—For the best two specimens, to B. G. Smith, ...	4 00
For the second best, to M. W. Chadbourne, . .	3 00
For the third best, to Mrs. M. T. Goddard, . .	2 00
Beans.—For the best Large Lima, two quarts, to G. W. Pierce, ...	4 00
For the second best, to B. G. Smith, . . .	3 00
For the third best, to George Hill, ...	2 00
Parsnips.—For the best Long, twelve specimens, to W. W. Rawson, ...	4 00

For the second best, to Josiah Crosby, . . .	$3 00
For the third best, to John Fillebrown, . . .	2 00
Potatoes.—For the best four varieties, one peck each, to Walter Russell, ...	6 00
For the second best, to J. L. DeWolf, . . .	5 00
For the third best, to S. A. Merrill, . . .	4 00
For the best peck of Jackson, to Samuel Hartwell, .	3 00
For the best peck of Brownell's Beauty, to John Cummings, ...	3 00
For the best peck of Early Rose, to Walter Russell, .	3 00
For the best peck of Bresee's Prolific (or No. 2), to John Cummings, ...	3 00
For the best peck of Snow Flake, to C. G. Pringle, .	3 00
For the best peck of any other variety, to C. G. Pringle, for Alpha, ...	3 00
Salsify.—For the best twelve specimens, to John L. DeWolf, ...	4 00
For the second best, to W. A. Crafts, . . .	3 00
For the third best, to Mrs. M. T. Goddard, . .	2 00
Squashes.—For the best Marrow, four specimens, to George Hill, ...	4 00
For the second best, to Seth W. Hathaway, . .	3 00
For the third best, to George W. Pierce, . .	2 00
For the best Hubbard, four specimens, to George Hill,	4 00
For the second best, to J. J. H. Gregory, . .	3 00
For the third best, to W. Russell, ...	2 00
For the best Turban, four specimens, to Seth W. Hathaway, ...	4 00
For the second best, to J. J. H. Gregory, . .	3 00
For the third best, to George W. Pierce, . .	2 00
For the best Marblehead, four specimens, to S. W. Hathaway, ...	2 00
For the second best, to John Cummings, . .	3 00
For the third best, to Mrs. M. T. Goddard, . .	2 00
For the best Canada, four specimens, to J. H. Fenno,	4 00
For the second best, to Josiah Pratt, . . .	3 00
For the third best, to John L. DeWolf, . . .	2 00
Turnips.—For the best twelve specimens, to Walter Russell, ...	3 00
For the second best, to S. A. Merrill, . . .	2 00

For the third best, to A. T. Brown, . . . $1 00
For the best twelve Swedish Turnips, to A. T. Brown, 3 00
For the second best, to Mrs. M. T. Goddard, . . 2 00
For the third best, to S. A. Merrill, . . . 1 00
Cabbages.—For the best Drumhead, three specimens, to John Cummings, ... 4 00
For the second best, to S. A. Merrill, . . . 3 00
For the third best, to Mrs. M. T. Goddard, . . 2 00
For the best single specimen, to John Cummings, . 3 00
For the second best, to S. A. Merrill, . . . 2 00
For the best Red, three heads, to Anthony Hatch, . 4 00
For the second best, to Mrs. M. T. Goddard, . . 3 00
For the third best, to S. A. Merrill, . . . 2 00
For the best Savoy, three heads, to John Cummings, . 4 00
For the second best, to S. A. Merrill, . . . 3 00
For the third best, to Mrs. M. T. Goddard, . . 2 00
Horse Radish.—For the best six roots, to W. W. Rawson, 3 00
For the second best, to Walter Russell, . . . 2 00
Peppers.—For the best peck, to George W. Pierce, . 4 00
For the second best, to George F. Stone, . . 3 00
For the third best, to C. N. Brackett, . . . 2 00
Onions.—For the best peck of any one variety, to George W. Pierce, ... 4 00
For the second best, to Walter Russell. . . . 3 00
For the third best, to G. F. Stone, ... 2 00
For the best three varieties, one peck each, to Josiah Crosby, ... 5 00
For the second best, to Anthony Hatch, . . . 4 00
For the third best, to Walter Russell, . . . 3 00
Egg Plants.—For the best Round Purple, four specimens, to Walter Russell, ... 4 00
For the second best, to Josiah Crosby, . . . 3 00
For the third best, to George W. Pierce, . . 2 00
For the best Black Pekin, four specimens, to George W. Pierce, ... 4 00
For the second best, to C. M. Atkinson, . . . 3 00
For the third best, to George Hill, ... 2 00
Pumpkins.—For the best four specimens, not less than twenty pounds each, to W. W. Rawson, . . 3 00
For the second best, to Anthony Hatch, . . . 2 00

Gratuities:—

To E. S. Brownell, for collection of Seedling Potatoes, .	$6 00
Samuel Hartwell, for " Potatoes, . .	8 00
George W. Pierce, " " " . . .	2 00
A. T. Brown, " " " . . .	2 00
Mrs. M. T. Goddard, for " " . . .	3 00
J. J. H. Gregory, for "	4 00
Seth W. Hathaway, " "	2 00
Joseph Swan, " "	4 00
W. A. Crafts, " "	2 00
G. F. Stone, " "	2 00
Hovey & Co., " " . . .	2 00
H. B. Parker, " "	2 00
Horace Partridge, " "	2 00
Josiah Newhall, " "	2 00
Charles Garfield, for Peerless Potatoes, . . .	1 00
Joseph H. Fenno, " Sweet " . . .	2 00
S. A. Merrill, for Turban Squashes, ...	3 00
" " " Mammoth "	2 00
Alexander Dickinson, for Butman Squash, . .	1 00
J. J. H. Gregory, " " " . .	1 00
George Craft, for Squash, ...	2 00
Frederick Trebandt, for Endive, ...	3 00
Walter Russell, for Lettuce, ...	2 00
Samuel Hartwell, for Watermelons, ...	1 00

October 9.

Cauliflowers.—For the best four heads, to Walter Russell, ...	4 00
For the second best, to John Cummings, . . .	3 00
Celery.—For the best four roots, to Josiah Crosby, .	4 00
For the second best, to John Fillebrown, . .	3 00
For the third best, to Walter Russell, . . .	2 00
Cabbages.—For the best Red, three heads, to Anthony Hatch, ...	4 00
For the second best, to John Cummings, . . .	3 00
For the best Savoy, three heads, to John Cummings, .	4 00
For the second best, to Anthony Hatch, . . .	3 00
For the best Drumhead, three heads, to John Cummings, for Brunswick, ...	4 00

For the second best, to John Cummings, for Mammoth, ... $3 00

Salsify.—For the best twelve specimens, to Anthony Hatch, ... 4 00

For the second best, to Josiah Crosby, . . . 3 00

Horse Radish.—For the best six roots, to W. Russell, 4 00

For the second best, to John Fillebrown, . . 3 00

Gratuities:—

To A. S. M'Intosh, for Artichokes, ... 1 00

F. Trebandt, for Endive, ... 1 00

Walter Russell, for Turnips, ... 1 00

Miss A. C. Wheeler, for Tomatoes, ... 1 00

November 7.

Gratuities:—

To James Comley, for Veitch's New Dwarf Cauliflower, . 3 00

Josiah Crosby, for very fine Celery, ... 3 00

Anthony Hatch, for collection, ... 4 00

A. S. M'Intosh, for Artichokes, ... 1 00

J. H. Fenno, for Sweet Potatoes, ... 1 00

November 20.

Gratuity:—

To James Comley, for Cauliflowers, ... 2 00

The amount awarded to each contributor is as follows:—

C. M. Atkinson . .	$7	John L. DeWolf . .	$11
C. N. Brackett . .	37	Alexander Dickinson .	7
A. T. Brown . .	13	J. H. Fenno . . .	7
E S. Brownell . .	6	John Fillebrown . .	44
Carter, Dunnett & Beale, London, . . .	2	Peter Fottler . .	1
M. W. Chadbourne .	12	Charles Garfield . .	33
C. W. Chamberlain .	30	W. Gage . . .	4
W. C. Child . . .	19	Mrs. E. M. Gill . .	9
James Comley . .	5	Mrs. M. T. Goddard .	32
George Craft . .	2	C. E. Grant . . .	19
W. A. Crafts . .	5	J. J. H. Gregory . .	17
Josiah Crosby . .	150	Anthony Hatch . .	47
John Cummings . .	45	Samuel Hartwell . . .	28
		Seth W. Hathaway .	13

D. F. Hayes	$3	W. G. Prescott	$4
George Hill	47	C. G. Pringle	6
Hovey & Co.	2	W. W. Rawson	15
C. D. Kingman	19	M. K. Rollins	1
George M. Mellen	22	Walter Russell	135
S. A. Merrill	35	S. H. Scott	3
A. S. M'Intosh	3	Benj. G. Smith	19
John B. Moore	15	W. H. Spooner	6
Josiah Newhall	7	George F. Stone	21
George N. Noyes	6	Joseph Swan	4
J. C. Park	1	Joseph Tailby	14
H. B. Parker	2	J. B. Tilley	1
—— Parker	1	Frederick Trebandt	4
H. Partridge	2	S. W. Twombly & Son	2
W. D. Philbrick	1	Miss A. C. Wheeler	4
George W. Pierce	88	N. B. White	2
A. A. Pope	2	Marshall P. Wilder	9
Josiah Pratt	3	J. H. Woodford	1

Amount of Appropriation,	$1,200 00
Prizes and Gratuities awarded,	1,119 00
Balance not awarded,	$81 00

REPORT

OF THE

COMMITTEE ON GARDENS,

FOR THE YEAR 1875.

By WILLIAM GRAY, Jr., Chairman.

The Committee on Gardens submit the following report of the places visited, and prizes awarded, during the year 1875:—

Edward S. Rand, Jr's.

Mr. Rand's Greenhouses at Dedham have been visited twice; on the 23d of April, and on the 19th of November. The Orchids were the principal attraction on both occasions. At our spring visit *Cattleya Skinneri* and *C. Trianæ*, *Lycaste Skinneri*, *Phalænopsis amabilis*, *Saccolabium retusum*, *Vanda tricolor* and *V. cœrulescens*, with several *Cypripediums* and *Dendrobiums*, were in flower; many other kinds in bud gave promise of fine bloom later in the season. The condition of the houses and plants was not satisfactory.

At the second visit, although the floral display was not so fine, *Zygopetalum crinitum* with seventy flowers, *Vanda cœrulea* and *V. tricolor*, *Cypripedium Harrisianum* and *C. biflorum*, being the finest specimens in bloom, the improvement in the plants was so marked that it gives us great pleasure to record it here.

We award to Mr. Rand, for Orchids, which he has made a specialty, and of which he has the finest collection in this neighborhood, a gratuity of twenty-five dollars.

City Hospital.

On the 14th of August we visited the grounds of the Hospital, on Harrison Avenue, where the walks and grass were neatly kept,

and the flower borders were free from weeds; but there was nothing worthy of note in the arrangement of the plants, or in the kinds employed.

The mode of heating the Greenhouse is novel, and, where steam is always at command, must be economical; the usual four-inch pipes are connected with an upright iron tank in which the water is heated by a coil of steam pipes; the circulation is said to be perfect, and the temperature in the coldest weather of last winter did not fall below 58 degrees. The simplicity of the arrangement is admirable, and it can be used with advantage wherever steam is kept up constantly for other purposes.

Mrs. C. H. Leonard's.

On the 18th of September the Committee went to Mrs. Leonard's, in Rochester, Mass., to inspect the Orchard House, under the care of John Falconer. Here we found the peach, plum, apricot, nectarine, and cherry trees, in the finest possible condition, and had an opportunity of testing many kinds; among them, several of Rivers' latest seedling peaches and nectarines.

We award to Mrs. Leonard the Society's silver medal; and to Mr. Falconer the first prize of fifty dollars for the best Orchard House.

E. W. Wood's.

The only Grapery entered for premium this year was Mr. Wood's, at Newton. On the occasion of our visit it was filled with a remarkable crop of grapes, and everything was in perfect order. It is with great pleasure that we award to Mr. Wood the first prize of fifty dollars.

Woodlawn Cemetery.

By invitation of the Treasurer we passed an afternoon at Woodlawn. This Cemetery was begun in 1851, and now contains one hundred and seventy-five acres; it is situated in Everett, and is best approached through Chelsea and by Mount Washington Avenue. The principal features which distinguish this from other cemeteries in our vicinity are the lawn, near the entrance, of nearly twenty acres, bordered with a fine growth of trees, and Woodside and Netherwood Avenues, — the former three-fourths,

the latter half a mile in length. Netherwood Avenue, passing through a forest, with an undergrowth of rhododendrons and kalmias in many places, is particularly beautiful.

We award to Woodlawn Cemetery a gratuity of fifty dollars.

Newton Cemetery.

This Cemetery was begun a few years after Woodlawn, and contains about eighty acres. Although one of the latest established of the burial places near Boston, it ranks to-day among the foremost for beauty and finish. For simplicity and good taste, we consider it unrivalled; there is but little of the heavy granite and iron work so conspicuous in some other places, and in the new lots none is allowed — a rule which we think might be advantageously adopted by the older cemeteries in our neighborhood.

We award to the Newton Cemetery a gratuity of fifty dollars.

For the Committee,

WILLIAM GRAY, Jr., *Chairman.*

REPORT

OF THE

COMMITTEE ON PUBLICATION AND DISCUSSION.

The series of meetings for discussion held during the past year has confirmed the belief that the establishment of these meetings was the most important step in advance taken by the Society for many years, while the publication of the discussions has done more to extend the reputation of the Society, both in this country and abroad, than any other action since its formation.

The offering of prizes for essays must still be looked upon as an experiment, but the Committee deem it so far successful that they would ask for a renewal of the appropriation for the ensuing year, so that, if thought advisable to offer further prizes for essays, it may be done in season to afford more time for their preparation than was given last year.

It is gratifying to know that our schedule, though issued later than we could have wished, attracted attention and called forth contributions from all parts of our country, and even from across the Atlantic. In this connection it may be of interest to recall the offer, in the first schedule of prizes, published by the Society in 1829, of premiums for manuscript treatises—first, on the Cultivation and Management of Fruit Trees; second, on the Insects that attack Fruit Trees, and the best methods of destroying them; and third, on the Diseases of Fruit Trees, with the best method of preventing them. No prizes, however, were awarded, and it does not appear that any manuscripts on these subjects were offered. It is believed that the prize for the paper on the Cultivation of the Cabbage and Cauliflower is the first ever awarded by the Society for an essay. Indeed, our TRANSACTIONS for nearly half a century are singularly wanting in original papers devoted to horticultural science, if we except the annual reports of our Standing Committees, which are from necessity limited to a narrow channel. The experience of the past season would indicate that a quick

response would be given should the Society continue to offer prizes for essays.

It will doubtless often happen that papers will be accepted which may not contain new or original ideas, but which are yet practical and useful. And again, essays may be received which may advance theories from which there would be a general dissent. An important object with us is to awaken interest and lead to thoughtful experiment The fact that an essay receives a prize does not commit the Society to any theories which may be advanced therein, or to any opinions of individual members uttered in discussion. But it is deemed advisable to publish anything that is suggestive or that is likely to lead to investigation. Our exhibitions of horticultural products, however excellent, impart no information as to the methods of growing them. It is true that our cultivators are generally ready to give such knowledge to those who may have the good fortune to be acquainted with them, but this means of diffusing information is necessarily of limited extent. Essays and discussions, on the contrary, when published in the TRANSACTIONS of the Society may be read by every member and by horticulturists everywhere. In this way we may bring to light the knowledge and experience of our members and exert an influence which shall be wide-spread and permanent.

The Committee have made the following awards:

For the best Essay upon Grape Culture in gardens and on buildings, with a list of varieties best adapted to such purposes, to W. N. Barnett, of West Haven, Conn., the prize of $25 00

For the best Essay upon the Culture of the Cauliflower and other vegetables of the Cabbage family (*Brassica oleracea*), to William N. White, the prize of . 25 00

For the best Essay upon the principles of Landscape Gardening, as applied to small suburban estates, to Daniel D. Slade, the prize of 25 00

To James Cruickshanks, for a paper on Landscape Gardening, a gratuity of 15 00

For the Committee,

WILLIAM C. STRONG,

Chairman.

REPORT OF THE EDITOR.

The recent establishment of the office of Editor seemed to require a year ago a full report of the doings of the previous year, but the similarity of duties makes it inevitable that the report of this year should be to a great extent a repetition of that of the last.

The making of notes of the discussions, the after writing out and submitting to the revision of the various speakers, the preparation of the other matter contained in our TRANSACTIONS for the press, and the superintendence of the printing, have, as last year, been the chief labors properly coming under the head of editorial. It will be noticed that our publications have increased in size, with a corresponding increase in the work of preparation.

The full reports of the weekly and annual exhibitions have been continued in the "Evening Transcript," and to these have been added brief notices of the meetings for discussion.

The number of specimens of fruit presented for name has been less the past year than in 1874; but, whether or not owing to the remarks made on this subject a year ago, the condition of such as were brought in showed a marked improvement.

The revision of the By-Laws, last spring and summer, more thorough than any previous one, occupied more of my time as Secretary of the Committee charged with that duty than could have been anticipated.

The two parts of the TRANSACTIONS, with the revision of the By-Laws and the miscellaneous work carried on while preparing and printing them, occupied several months, during which I was unable to give any attention to the History of the Society, but immediately on the completion of the TRANSACTIONS the history was resumed, and after very thorough investigation the chapters on the Finances of the Society, the various Halls occupied by it, and on the Library, have been wholly rewritten, leaving now little besides the account of the Exhibitions of the Society to be completed.

ROBERT MANNING, *Editor.*

THE ANNIVERSARY DINNER OF THE SOCIETY.

For several years after the formation of the Society the anniversary was celebrated by a public address and a dinner of the members of the Society and invited guests. The only Annual Exhibition was held in connection with the dinner, the fruits and bouquets being placed upon the table, and the dining-hall being decorated with the plants, festoons and bouquets contributed, until 1834, when the first display similar to our present Annual Exhibitions was held in Faneuil Hall. In 1842, 1845, and 1848 "Triennial Festivals," to which ladies were invited, were held, which were probably unsurpassed by any similar festivals ever held in Boston. Since 1848 the only anniversary dinner has been that of the Committee of Arrangements with a few invited guests, at the expense of the Society, on the day after the Annual Exhibition.

The past year it was thought advisable to change this plan and to provide a dinner to which all members of the Society, with ladies, should be admitted on an equal footing, and which was accordingly given in the Upper Hall at the close of the Annual Exhibition on Saturday, September 25th, being the first time that the Society has ever met in a social gathering under its own roof. No attempt was made to rival the Triennial Festivals of former days, the occasion being rather a modest family gathering, but invitations were sent to all the more prominent benefactors of the Society, or their representatives. Other invited guests were His Excellency Governor Gaston, Rev. James Freeman Clarke, Professor Asa Gray, and Judge John P. Putnam, of the Superior Court. The platform in the rear of the guests' table was covered with tropical plants, and the Germania Band was stationed in the gallery. At four o'clock about four hundred ladies and gentlemen sat down to dinner.

After an hour's feast President Parkman called the company to order, and said that he was happy to meet the members of the Society on this social occasion. The Massachusetts Horticultural

Society was never so strong and its prospects never so bright before. It had a thousand members, in every department of life, and its influence for good was extending over every part of the country. In a few appropriate remarks he then introduced His Excellency the Governor.

Governor Gaston thanked the audience for their kind reception. He rejoiced in this season of business depression, when many of the arms of industry were paralyzed, that the earth poured forth her bounteous fruits in abundance; that by the providence of God seed time and harvest would not fail, and that there were blessings and mercies for us, notwithstanding the ominous look of things upon the earth, and said this season of the year, when the fruits of the earth reached their greatest luxuriance, was an especially appropriate time for festivity. The Governor concluded by saying that he took pleasure in acknowledging the importance and usefulness of the Society, and hoping that its future might be worthy of its present.

The President next introduced Rev. James Freeman Clarke, who related an anecdote of the Boston nectarine, which was introduced by the late Samuel G. Perkins. Mr. Perkins sent to the London Horticultural Society a painting of this fruit so richly colored that its correctness was doubted. Some time afterwards Mr. Perkins was travelling in Europe, and met an Englishman who asked him if he did not come from America. Mr. Perkins replied that he did, and the Englishman said that he was a member of the London Horticultural Society, and that they received from Boston some years ago a painting of a fruit with colors so bright and beautiful that he did not believe it was or could be natural. Mr. Perkins said it was natural; he had seen the picture and the fruit, and the colors corresponded. The Englishman said nothing more then, but when they reached an inn that night, and were about parting to retire, asked: "May I trouble you to just repeat what you said about that nectarine?" Mr. Perkins repeated what he had said, and added that he knew the picture well, he had seen the nectarines, had the picture painted, owned the trees, raised the fruit, and his name was Perkins! The Englishman said not another word but left the room, evidently thinking the whole story a Yankee humbug.

After music by the band President Parkman introduced Marshall P. Wilder, Ex-President of the Society.

Mr. Wilder thanked the assembly for the cheers with which the announcement of his name was greeted, and the President for having revived the festivals of the Society, and for the invitation to the ladies, whose presence always adds beauty and brilliancy to such scenes. He alluded to the first Triennial Festival, thirty-three years before, when it was a question whether ladies should be admitted to the festive board. It was agreed that they should, and so far as he knew that was the first horticultural festival where woman graced the table, and this brought to his mind those halcyon days when the Society held its festivals in the Cradle of Liberty, when the panels were adorned with the names of the patrons of horticulture, the pillars enwreathed with garlands, and the tables surrounded with flowers of female loveliness, with Madam Alexander Hamilton at their head; when Webster, Everett, Seward, Dearborn, Downing, and others of like distinction, honored us with their presence. But these were all gone, and only a few of the original members of the Society were left. Of its first officers, only three still live; Hon. John C. Gray, a Vice-President, Cheever Newhall, Treasurer, and Dr. Jacob Bigelow, Corresponding Secretary. Mr. Wilder regretted their absence this evening, but rejoiced that we had representatives of Dr. Bigelow, — his daughter, and his son-in-law, our honored President. To Dr. Bigelow, more than to any other man, the public were indebted for the idea of establishing the Cemetery of Mount Auburn.

Mr. Wilder alluded to the time, which many could remember, when there was not a horticultural society, a horticultural magazine, or a horticultural exhibition in our broad land, and said that now they are counted by hundreds, and in all this progress, the Massachusetts Horticultural Society had been a great leader and exemplar. He concluded by saying that when he reflected upon the enjoyment he had had in the cultivation of fruits and flowers, and the pleasures of rural life, he sometimes felt as though he would like to live here forever. "Though in heaven the trees of life ambrosial fruitage bear, and vines yield nectar," yet God had made this world so fair and beautiful, and the communion with dear and cherished friends so precious and delightful, that he prayed that he might be permitted to live here a little longer to co-operate with the Society in the promotion of its objects. In the midst of the joyous scenes of the evening, drinking in the sweet odor of fruits and flowers, and the still sweeter incense from kindred souls, he felt that he was living his life over again.

President Parkman then remarked that the Society owed a great deal of its prosperity to Theodore Lyman, and it gave him pleasure to present to the company a son of that gentleman, Colonel Theodore Lyman.

Colonel Lyman said that he had been introduced as somebody's son, and no greater disadvantage could befall a man on an occasion like this, for immediately all the elderly people began to prick up their ears and open their eyes in the expectation of seeing some similarity between the father and son, but in a great many cases they were disappointed. Something had been said about Lee's surrender, and that he had a share in bringing it about, and people expected to see a man with a small share of arms, with no legs in particular, and a terrible scar across his face; and if he were not like this — if he were not a sort of General Bartlett, with not much left but his head and his heart, why people looked on him as an impostor. Col. Lyman concluded with an ingenious argument to prove that this was the oldest country in the world; that we had created a fertile soil out of sand — in fact, made something out of nothing.

Rev. Asa Bullard, President of the Cambridge Horticultural Society, was the next speaker, and took for his theme the concentration of labor on the land. Addresses were also made by Prof. Gray, Judge Putnam, Rev. A. B. Muzzey, Ex-President J. F. C. Hyde, Vice Presidents H. Weld Fuller and P. Brown Hovey; C. H. B. Breck, Chairman of the Committee of Arrangements; E. W. Buswell, Treasurer, and Hervey Davis, Chairman of the Fruit Committee. A poem written for the occasion was read by Edward S. Rand, Jr., and the exercises were concluded at an early hour by the singing of "Auld Lang Syne," by the company.

REPORT

OF THE

COMMITTEE ON THE LIBRARY,

FOR THE YEAR 1875.

During the past year no large addition has been made to the Library of the Society. The purchase of the magnificent copy of the rare Flora Danica, in the latter part of the year 1874, not only exhausted the appropriation for that year, but drew heavily in advance upon the funds of 1875.

Although a special appropriation, recently made for this object, has placed the Committee in funds, there have been but few desirable works offered, and a balance will remain to the credit of the Committee. There is one feature peculiar to all great scientific works, which accounts for their scarcity. The first cost is great, and the edition is usually small. Once out of print (and they are seldom stereotyped), they are rarely again produced. The result is that the copies soon find permanent resting places on the shelves of libraries, and are seldom found in the market. At times, however, when an old private library comes under the hammer of the auctioneer, an opportunity is offered of obtaining such rare works, and it is to such opportunities that our library owes many of its choicest acquisitions. To enable your Committee to avail itself of such occasions, it is advisable that funds should always be at its disposal. It is a good rule never to neglect an opportunity to purchase a rare and desirable book, if the price is not exhorbitantly high; for it is the worst of economy to delay for another chance which may never come. The aim of our Society should be to place upon its library shelves every obtainable volume on horticulture, or kindred subjects. Let it be understood that any such volume can be found in our library, and that fact at once gives a position of influence to the Society. It is true we may thus accumulate many books for which there will be little call, and

which few will wish to consult. But it is one of the duties of the Society to have for the use of its members, and through them for the public, volumes with which we do not care to cumber our private libraries. The proper place of such volumes is in our library, and while we should always keep a sufficient number of copies of the more common text-books of horticulture, it is not so much the duty of the Society to supply these as to keep for ready reference volumes which from age or high cost are not obtainable by the general public.

There are very many costly illustrated volumes which are so expensive that few private individuals can possess them, and these should be in our library. We are fortunate in possessing many such, and every year, as occasion offers, more are added. The growth of the library during the last nineteen years, since in 1857 the writer first became a member of the Committee, has been remarkable. From a small beginning there has been constant and rapid increase, till now the want of increased accommodation is a serious obstacle to ready reference to many books. This matter must receive early attention from the Society.

The binding of serial magazines is important, as from these the progress of horticulture, and the data so necessary for its history, are most readily obtained. These serials should be so shelved as to be of ready access.

The Committee would particularly call the attention of the Society to the magnificent copy of Curtis' Flora Londinensis, which was purchased from the library of the late Charles Sprague. For beauty of coloring, fidelity to nature, and elegance of binding, the volumes are most valuable. Beddome's Ferns of British India is a decided acquisition, and is a rare and valuable work upon a most interesting department of horticulture.

Jennings' and Warner's Orchidaceous Plants, and Bateman's Monograph of Odontoglossum, are most beautifully illustrated volumes, the high cost of which will ever prevent them from becoming common. Lindley's Nature Printed Ferns is a very rare volume, which has long been a desideratum, and at last we are fortunate in obtaining a fine copy.

The Committee regret that so few works on Pomology are obtainable, but hope to make this department of the library more prominent in the future.

Of donations, your Committee would call special attention to

the new edition of Emerson's Trees and Shrubs of Massachusetts, of which a beautiful copy has been presented by the author. A large number of volumes were received from the Cambridge Horticultural Society, some of which are of great value.

The continued use of the library and reading room during the past year shows that members appreciate these advantages.

Your Committee can only hope that each year may show increasing interest, and that the library may ever prove one of the most important means of usefulness to the Society.

For the Committee,

EDWARD S. RAND, Jr., *Chairman.*

LIBRARY ACCESSIONS IN 1875.

Books Purchased.

Torrey, John. Botany of the United States and Mexican Boundary Survey, 61 plates; and Engelmann, George M., Cactaceæ, 75 plates. 4to.

Curtis, William. Flora Londinensis; new edition, enlarged by George Graves and W. J. Hooker. 5 vols. folio, 660 colored plates.

Lindley, John, P. H. D., F. R. S., and Thomas Moore, F. L. S., The Nature printed Ferns of Great Britain and Ireland. Atlas folio, 51 colored plates.

Beddome, R. H. Ferns of British India. Thick 4to., 344 plates.

Jennings, Samuel. Orchids, and how to grow them in India and other Tropical Countries. 4to., 47 colored plates.

Bateman, James, F. R. S., F. L. S. A Monograph of Odontoglossum. Atlas folio, 30 colored plates.

Warner, Robert, F. L. S., F. R. H. S., and Benjamin S. Williams. Select Orchidaceous Plants; second series. Large folio, 39 colored plates.

Burbidge, F. W., and J. G. Baker. The Narcissus, its History and Culture. 8vo., 48 colored plates.

Thomas, John J. The Illustrated Register of Rural Affairs, vol. 7. 12mo.

Darwin, Charles. Insectivorous Plants. 8vo.

Sachs, Julius. Text Book of Botany, Morphological and Physiological; with notes by Bennett and Dyer. Royal 8vo.

Smith, James Edward, M. D., F. R. S., etc. Lachesis Lapponica, or a Tour in Lapland. From the Journal of Linnæus. 2 vols. in one, 8vo.

Gray, Asa. Manual of the Botany of the Northern United States; 5th edition. 8vo.

Mann, Horace. Enumeration of Hawaiian Plants. 8vo. pamphlet.

Books and Pamphlets Presented.

Gerarde, John. The Herball, or a Generall Historie of Plantes. Second Edition, enlarged and amended, by Thomas Johnson. Folio, pp. 1630. London, 1633. Andrew S. Fuller.

Browne, D. J. Sylva Americana. 8vo. Miss Miriam Parsons.

Emerson, George B., L.L.D. A Report of the Trees and Shrubs growing naturally in the Forests of Massachusetts. Second edition, 2 vols., large 8vo. Many plates, partly colored. The Author.

Henderson, Peter. Gardening for Pleasure. 12mo. The Author.

Fitch, Asa, M.D. Entomological Reports of New York. Vols. 3, 4, 5, 6, 7, 8, 9, in 2 vols., to complete the set. 8vo. T. L. Harison, Secretary of the New York State Agricultural Society.

Le Baron, William, M.D. Entomological Reports of Illinois, 1871, 2, 3, and 4, in 1 vol., 8vo. The Author.

Transactions of the Illinois Horticultural Society, 1860. To complete the set. 8vo. pamphlet. W. C. Flagg.

Transactions of the Illinois Horticultural Society for 1874. With Appendix, being the Fourth Annual Report on the Entomology of Illinois, by Dr. William Le Baron. 8vo. Arthur Bryant.

Transactions of the Alton Horticultural Society, 1863–64. 8vo. pamphlet. W. C. Flagg.

Fourteenth Annual Report of the Indiana Horticultural Society. 8vo. W. H. Ragan, Secretary.

Transactions of the Wisconsin Horticultural Society at Madison, February, 1875. 8vo. F. W. Case, Secretary.

Transactions of the Kansas Horticultural Society for 1873. 8vo. pamphlet. G. C. Brackett, Secretary.

Transactions of the Western New York Horticultural Society, January 6 and 7, 1875. 8vo. pamphlet. J. J. Thomas.

Transactions of the Worcester County Horticultural Society for 1874, with Prize Schedule for 1875. 8vo. pamphlet. E. W. Lincoln, Secretary.

Bulletin de la Société Centrale d'Horticulture du Department de la Seine-Inferieure. Vol. 16, Parts 1, 2, 3, 4; Vol. 17, Part 1. 5 pamphlets, 8vo. The Society.

Second Annual Report of the Maine Pomological Society. 8vo. G. B. Sawyer, Secretary.

Report of the Pennsylvania Fruit Growers' Society for 1873–4. 8vo. pamphlet. E. B. Engle, Secretary.

Transactions of the Northwestern Fruit Growers' Association, 1851 and 1855. 2 pamphlets, 8vo. W. C. Flagg.

Report of the Fruit Growers' Association of the Province of Ontario, with Report of the Entomological Society, for 1874. 8vo. pamphlet. Rev. Robert Burnet, President.

Second Annual Report of the Commissioners of Public Parks of New York, for 1871. 8vo. A. H. Green, Comptroller.

Fifth Annual Report of the Commissioners of Central Park, New York. 8vo. pamphlet. F. W. Andrews.

Reports of the South Park Commissioners of Cook County, Ill., for the Years 1872, '73, and '74. 3 pamphlets, 8vo. H. W. Harmon, Secretary.

First, Second, Third, and Fourth Annual Reports of the Commissioners of Fairmount Park, Philadelphia. 4 pamphlets, 8vo. R. H. Robbins, Secretary.

Report of the Commissioners of Public Grounds of the City of Worcester for 1874. 8vo. pamphlet. E. W. Lincoln, Chairman.

Plan and Description of the United States Centennial Exhibition, as proposed at Philadelphia, 1876. 8vo., plates and maps. N. E. Janney.

Proceedings of the South Carolina Agricultural and Mechanical Society, 1872. 8vo. pamphlet. D. W. Aiken.

Transactions of the Middlesex Agricultural Society for 1874, with Prize Schedule for 1875. 8vo. pamphlet. John B. Moore, Secretary.

Monthly Journal of the Maryland Agricultural Society. Vol. 1, Nos. 1 and 2. 2 pamphlets, 8vo. T. B. Dorsey, Secretary.

Address of A. G. Thurman before the Maryland Agricultural Society, October 8, 1874. 8vo. pamphlet. T. B. Dorsey.

Seventh and Eighth Annual Reports of the Connecticut State Agricultural Society, 1873 and 1874. 2 vols., 8vo. T. S. Gold, Secretary.

Report of the New Jersey Agricultural Society for 1874. 8vo. pamphlet. P. T. Quinn, Corresponding Secretary.

Twenty-Second Annual Report of the Massachusetts Board of Agriculture. Additional copies for distribution. 8vo. C. L. Flint, Secretary.

Abstract from Returns of Agricultural Societies in Massachusetts for 1845, to complete the set. 8vo. pamphlet. C. L. Flint.

Twelfth Annual Report of the Massachusetts Agricultural College. 50 additional copies for distribution. 8vo. pamphlet. W. S. Clark, President.

Clark, W. S. Observations on the Phenomena of Plant Life. 8vo. pamphlet. The Author.

Nineteenth Annual Report of the Maine State Board of Agriculture, including Reports of the Maine Pomological Society, County Societies, etc. 8vo. S. L. Boardman, Secretary.

Second Biennial Report of the Board of Agriculture, Manufactures, and Mining of the State of Vermont, for 1873–4. 8vo. C. G. Pringle.

Report of the Commissioner of the United States Department of Agriculture for 1872. 10 Copies. Report for 1873. 10 Copies. 8vo. The Department.

Catalogue of Plants collected in 1871, '72, and '73, in Nevada, Arizona, Colorado, and Utah, by Lieut. G. M. Wheeler. 8vo. pamphlet.

Farlow, W. G. The Potato Rot. 8vo. pamphlet. F. H. Appleton.

Bulletin of the Bussey Institute. Part 4. 1875. 8vo. pamphlet. The Institute.

Boston Society of Natural History: Memoirs, Vol. 2, Part 3, No. 5, and Part 4, No. 1. 2 pamphlets, 4to. Proceedings, Vol. 17, Parts 2 and 3. 2 pamphlets, 8vo. The Society.

Report of the Astor Library for 1874. 8vo. pamphlet. S. B. Ruggles, Secretary.

Reports of the University of Missouri for 1874 and 1875, 2 pamphlets, 8vo. G. C. Swallow.

Proceedings of the New England Historic Genealogical Society for 1874. 8vo. pamphlet. Marshall P. Wilder, President.

Proceedings of the American Antiquarian Society, Nos. 63 and 64. 2 pamphlets, 8vo. The Secretary.

Quincy, Josiah. Memoir of his Father, Josiah Quincy, Jr., 1744—1775. 8vo. Miss Eliza Susan Quincy.

The following fifty titles, comprising fifty-six volumes, are a donation from the Cambridge Horticultural Society:

Morton, John C. A Cyclopedia of Agriculture, Practical and Scientific. 2 vols., thick 8vo.

Emerson, Gouverneur. The American Farmer's Encyclopedia. Thick 8vo.

Stephens, Henry, F. R. S. C., and John P. Norton. The Farmer's Guide. 2 vols., thick 8vo.

Blake, Rev. John L., D. D. The Farmers' Every Day Book. 8vo.

Liebig, Baron Von. Letters on Modern Agriculture. 12mo.

Our Farm of Four Acres. With an Introduction by Peter B. Mead. 12mo.

Olcott, H. S. Outlines of the First Course of Yale Agricultural Lectures. 12mo.

Nash, J. A. The Progressive Farmer. 12mo.

Buel, Jesse. The Farmer's Companion. 12mo.

Walden, J. H., A. M. Soil Culture. 12mo.

Neill, Patrick, L. L. D., F. R. S. E., G. Emerson, M. D., and R. G. Pardee. The Practical Fruit, Flower, and Vegetable Gardener's Companion. 12mo.

Rural Manuals — House, Garden, Farm, and Domestic Animals; 4 vols. in one. 12mo.

Murray, Lady Charlotte. The British Garden, vol. 1. 8vo.

Goadby, Henry, M. D. A Text Book of Vegetable and Animal Physiology. 8vo.

Twining, Elizabeth. Short Lectures on Plants. 12mo.

Selby, Prideaux John, F. L. S., M. W. S., etc. A History of British Forest Trees, Indigeneous and Introduced. 8vo., nearly 200 wood cuts.

Low, David, F. R. S. E. The Domestic Animals of the British Islands. 8vo.

Herbert Henry William, [Frank Forester,] The Horse and Horsemanship. 2 vols., royal 8vo.

Baucher, F. A. Method of Horsemanship. 12mo.

Dadd, George H., M. D., V. S. The Anatomy and Physiology of the Horse. Royal 8vo.

Stewart, John, and A. B. Cullen. The Stable Book. 12mo.

Linsley, D. C. Morgan Horses. 12mo.

Mason, Richard, M. D., and J. S. Skinner. Farrier and Stud Book. 12mo.

Miles, William. The Horse's Foot. 12mo.

Youatt, W., W. C. L. Martin, and A. Stevens. Cattle. 12mo.

Magne, J. H., and John Haxton. How to Choose a Cow. 16mo.

Youatt, William. Sheep, their Breeds, Management, and Diseases; and Randall, H. S., Sheep Husbandry in the South. 8vo.

Youatt, William, V. S., W. C. L. Martin, and A. Stevens. The Hog. 12mo.

Cole, S. W. The American Veterinarian. 18mo.

Dadd, George H. Nature and Treatment of the Diseases of Cattle. 12mo.

Ure, Andrew, M. D. A Dictionary of Arts, Manufactures, and Mines. 2 vols., thick 8vo.

Hammond, J. H. The Farmers' and Mechanics' Practical Architect. Large 8vo.

Reid, David Boswell, M. D., F. R. S. E., and Elisha Harris. Ventilation of American Dwellings. 8vo.

Ewbank, Thomas. Hydraulics and Mechanics. 8vo.

Thomas, John J. Farm Implements, and the Principles of their Construction and Use. 12mo., 200 wood cuts.

Nicholson, Peter. The Mechanics' Companion. 8vo., 40 plates.

Lyell, Sir Charles, M. A., F. R. S. A Manual of Elementary Geology. 8vo., 750 wood cuts.

Hitchcock, Edward, D. D., L. L. D. Elementary Geology. 12mo.

Comstock, John L., M. D. An Introduction to Mineralogy. 12mo.

Wells, David A., A. M. Principles and Applications of Chemistry. 12mo., 240 wood cuts.

Johnston, James F. The Chemistry of Common Life. 2 vols., 12mo.

Lewes, George Henry. The Physiology of Common Life. 2 vols., 12mo.

Abell, Mrs. L. G. The Skilful Housewife's Book. 12mo.

Beecher, Miss Catherine E. A Treatise on Domestic Economy. 12mo.

Youmans, Edward L. The Hand-Book of Household Science. 12mo.

Hale, Mrs. Sarah Josepha. Flora's Interpreter, and Fortuna Flora. 12mo.

Ildrewe, Miss, and Thomas Miller. The Language of Flowers. 12mo.

Wood, Rev. J. G., M. A., F. L. S. Illustrated Natural History; vol. 1, Mammalia. Thick royal 8vo., many wood cuts.

Wood, Rev. J. G., M. A., F. L. S. The Illustrated Natural History. 12mo., 450 wood cuts.

Every Boy's Book. 12mo., 600 wood cuts.

Bancroft, George. Memorial Address on the Life and Character of Abraham Lincoln. 8vo.

Periodicals Taken.

English. — Gardener's Chronicle.
" Magazine.
Journal of Horticulture and Cottage Gardener.
The Garden.
Curtis' Botanical Magazine.
Floral Magazine.
Florist and Pomologist.
Floral World.
Journal of the Linnean Society.
Farmer's Magazine.
Country Gentleman's Magazine.
Journal of the Royal Agricultural Society.

French — Révue Horticole.

Belgian. — Illustration Horticole.
Flore des Serres.
Belgique Horticole.

American. — Gardener's Monthly.
Horticulturist.
California Horticulturist.
American Agriculturist.
Country Gentleman.
Rural New Yorker.
American Garden.
Rural Carolinian.
American Farmer.
Ladies' Floral Cabinet.
Silliman's Journal.
American Naturalist.

Periodicals Presented.

New England Farmer.
Massachusetts Ploughman.
Boston Cultivator.
Gardener's Monthly.
American Rural Home.
Maine Farmer.
Canada Farmer.
Prairie Farmer.
Maryland Farmer.
Rural Southerner.
Western Agriculturist.
Center Union Agriculturist.
Monthly Report of the Department of Agriculture.
Bulletin of the Essex Institute.
Bulletin of the Torrey Botanical Club.
Patent Right Gazette.
New York Semi-Weekly Tribune.
Rhode Island Press.
Boston Evening Transcript.
Boston Daily Globe.
Daily Evening Traveller.
Boston Morning Journal.
The Nursery.
The Cottage Hearth.

TREASURER'S REPORT,

FOR THE YEAR 1875.

ITEMS OF INCOME.

Balance of Cash on Hand,	$1,104 70
Received for Rent of Stores,	12,899 93
" " " Halls,	11,898 33
" " Admissions and Assessments,	1,270 00
" from Mount Auburn Cemetery,	2,962 85
Gross Receipts of Annual Exhibition,	590 00
Sale of Tickets to Festival,	402 00
Donation by Peter Smith, for Prizes,	50 00
	$31,177 81

ITEMS OF EXPENDITURE.

Salaries of Treasurer, Chairmen of Committees, and Recording Secretary,	$2,475 00	
Compensation of Editor,	1,000 00	
Library Accessions,	1,285 00	
Heating and Water, less paid by tenants,	536 91	
Stationery, Postage, and Printing,	1,747 22	
Alterations and Repairs on Building,	2,083 03	
Gas,	1,288 94	
New Furniture and Repairs,	210 70	
Expenses of Annual Exhibition,	1,591 51	
Expenses of Festival,	809 75	
Taxes,	3,699 00	
Interest,	3,534 55	
Reduction of Mortgage debt,	6,000 00	
Testimonial to Ex-President Strong,	150 00	
Medals,	164 25	
Balance of Prizes for 1874,	739 43	
Deposited on account of Prizes for 1875,	1,500 00	
Incidental Expenses,	1,945 88	
Balance to New Account,	416 64	
		$31,177 81

Boston, January 6, 1876.

We have examined the above account and found it correct, and the balance of cash on hand, four hundred and sixteen dollars and sixty-four cents, as stated.

Signed,

C. O. Whitmore,
H. H. Hunnewell,
B. P. Cheney,
} *Finance Committee.*

ASSETS AND LIABILITIES.

Assets.

Real Estate and Furniture, costing . . .		$255,508 22
Exhibition Ware, costing, ...		907 29
Library last year, ...	$13,510 60	
Added this year, ...	1,285 00	
		$14,795 60
		$271,211 11
Add Bonds of the C. B. & Q. Railroad, par value, ...		1,500 00
Total,		$272,711 11

Liabilities.

Mortgage debt, at 5½ per cent., payable September, 1883, ...	$60,000 00	
Loan without interest, payable to Harvard College, in 1899, ...	12,000 00	
		$72,000 00
Balance of Assets over Liabilities, not including works of art, ...		$200,711 11

By the last report our membership numbered .		1,032
Of these were Life Members, . . .	569	
Added by election, ...	11	
" " commutation, ...	3	
	583	
Deceased, ...	6	
		577

Brought over (*life members*), . . .			577
Annual members, ...		463	
Added, ...		19	
		482	
Deceased, ...	10		
Discontinued, ...	11		
Commuted, ...	3		
	—	24	
		—	458
			1,035

Income from the above: —

11 Life, ...	$330
19 Annual, ...	190
3 Commutations, . . .	60
345 Subscriptions, . . .	690
	$1,270,

A less sum than last year, but fair when we consider the condition of business matters.

Our income from Mount Auburn is even less than that reported last year; this is accounted for by large expenditures in improvements, for a statement of which see the report of the treasurer of that corporation, which follows this.

The stores are occupied as last year, by a renewal of leases, yielding an increase of rent.

The rent of Halls shows an increase of thirty-three per cent. over that of last year; a pleasing result not warranted by indications early in the season. May we not fairly assume this to be an index of public favor, and a proof of the high estimation in which our Halls and accommodations are held?

The receipts from the Annual Exhibition, and the Festival which followed it, when taken from the expenses, left a larger deficit than usual. The Festival, in its form, was an experiment untried for many years, and was not fully understood or appreciated, but, with this experience, we may improve.

The item of alterations and repairs is larger than ever before. Ten years of wear and decay, rendered necessary considerable outlay in our basement stores, for new floors, stairs, etc., but the greater part of these expenditures was on the roof and in the

storage loft. To detail the nature and extent of these operations, would extend this report unduly. However costly, they were deemed to be necessary for the security and well-being of the building.

The Library, Exhibitions, Discussions, etc., have been well and fully treated in the reports of the several committees, yet, as Superintendent and Librarian, I may be permitted to refer to them as having an important influence in creating an interest in the work of the Society, and in promoting an increased attendance. The plan of essays and discussions is comparatively new; the winter exhibitions especially, were never before so large and rare, and the usefulness of the library increases in a manifold degree with its growth. Fruits, plants, and flowers brought for names are gladly received, and, if in proper condition, are generally traced to identification. All this is legitimate work, and in proportion to its faithful performance will be our usefulness. I repeat, the library is always accessible, and our rooms, where all are invited to attend, are open during business hours. This invitation is again extended to the friends of horticulture from abroad.

E. W. BUSWELL, *Treasurer.*

Boston, Jan. 6, 1876.

Dr. *Massachusetts Horticultural Society, in account with the Proprietors of the Cemetery of Mt. Auburn.* **Cr.**

For Sales and Improvements within the Cemetery, for the year ending Dec. 31, 1875.

Cost of filling up and improving land at Mt. Auburn, unsalable or unfit for burial purposes; new Iron Fence and Wooden Fence on Stone Farm; for the year ending Dec. 31, 1875; the Massachusetts Horticultural Society being charged with their proportion of the same.			By Sales in January,		
Grading near Halcyon and Fountain Avenues,	$384 75		" " February,	725 00	
" between Fountain and Lime Avenues,	879 62		" " April,	1,814 00	
" Indian Ridge,	956 81		" " May,	1,939 50	
" Ostrich Path,	109 68		" " June,	2,686 00	
" Eagle, Swan, Circuit and Falcon Avenues, and land adjoining,	5,306 06		" " July,	3,237 50	
Expended on New Receiving Tomb,	350 51		" " August,	2,494 00	
New Iron Fence on Stone Farm,	10,562 12		" " September,	3,878 00	
" Wooden Fence on Stone Farm, West line,	923 54		" " October,	5,988 00	
			" " November,	3,696 00	
			" " December,	4,191 50	
				$32,724 50	
One-quarter of	$19,473 09	$4,868 27	Deduct for Annual Expense as per Charter,	1,400 00	
Balance due Massachusetts Horticultural Society,		2,962 85			
		$7,831 12	Mass. Horticultural Society, one-fourth part of	$31,324 50	$7,831 12
					$7,831 12

E. & O. E.

H. B. MACKINTOSH, *Treasurer.*

BOSTON, December 31, 1875.

MOUNT AUBURN CEMETERY CORPORATION,
Office, No. 16 PEMBERTON SQUARE.

BOSTON, Dec. 31, 1875.

GENTLEMEN: Enclosed please find copy of improvements, etc., for the year 1875, as rendered by the Superintendent of Mount Auburn Cemetery, showing in detail the charges rendered in my account with the Massachusetts Horticultural Society for the year 1875.

Very respectfully, your obedient servant,

H. B. MACKINTOSH, *Treasurer.*

To Messrs. C. O. WHITMORE and H. H. HUNNEWELL,
Finance Committee Mass. Hort. Society.

MASSACHUSETTS HORTICULTURAL SOCIETY,

To The Proprietors of the Cemetery of Mount Auburn, *Dr.*

For one-fourth (¼) of the following expenditures for grading land for sale, and fencing during the year 1875: —

1875.			
Nov. 15.	*New Iron Fence around Stone Farm.*		
Cook, Rymes & Co., bill for fence,		$10,300 00	
Grading, 52½ days, men,		118 12	
32 " horse and man,		144 00	
			$10,562 12
Jan. 30.	*New Receiving Tomb.*		
C. McArthur's bill: carpenter work, $28.39; glass for door, $5.83; putty, 18 c.		34 40	
35 lbs. paint, 5.25; 4¼ days painting, 9.56; canvas, 3.64,		18 45	
3 days, masons setting steps, 9.75; 11¼ days, carpenter on cupola, etc., 36.56,		46 31	
J. G. Gooch's bill: lumber, 34.40; Gale & Wood, do. do. 9.68,		44 08	
Top to cupola, 75 c.; hardware, 1.23; 1,259 feet sods, 31.48,		33 46	
Aug. 31.			
57¾ days, men grading,		129 94	
9¾ " man and horse,		43 87	
			350 51
Amount carried forward,			$10,912 63

	Amount brought forward,		$10,912 63
Sept. 30.	*Grading, near Halcyon and Fountain Avenues.*		
97 days, men,		218 25	
37 " man and horse,		166 50	
			384 75
June 30.	*Grading, between Fountain and Lime Avenues.*		
M. Fallon's bill: carting 1,543 yards of earth from Stone Farm, near new fence line, and filling hollow,		385 75	
70 days, men grading,		157 50	
74¾ " man and horse,		336 37	
			879 62
Oct. 30.	*Indian Ridge, Grading.*		
349¾ days, men,		786 94	
37¾ " man and horse,		169 87	
			956 81
Feb. 27.	*Ostrich Path, Grading.*		
23¼ days, men,		52 31	
12¾ " man and horse,		57 37	
			109 68
June 30.	*Wooden Fence on West line Stone Farm.*		
C. McArthur's carpenter's bill, 665.62; 660 lbs. mixed paint, 54.46,		720 08	
40½ days, painter, 91.12; labor, digging post-holes, 18.40,		109 52	
25¾ days, men grading,		57 94	
8 " man and horse,		36 00	
			923 54
Dec. 31.	*Eagle, Swan, Circuit and Falcon Av's & land adjoining.*		
1,113¾ days, men grading,		2,505 94	
622¼ " men and horse,		2,800 12	
			5,306 06
	Total amount for 1875, ...		19,473 09
	One-fourth part is		$4,868 27

Mt. Auburn, Dec. 31, 1875.

J. W. Lovering, *Supt.*

I certify the foregoing to be a true copy of accounts of improvements for the year 1875, rendered by the Superintendent.

H. B. Mackintosh, *Treasurer.*

Massachusetts Horticultural Society.

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JOHN ROBINSON, of Salem.

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A * denotes the member deceased.

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*Mrs. Bigelow, Medford.
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Thomas Hogg, New York.

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*THOMAS H. STEVENS, U. S. Navy, Middletown, Conn.

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DR. J. STRENTZEL, Martinez, Cal.

*JAMES P. STURGIS, Canton.

WILLIAM SUMMER, Pomaria, S. C.

FRANCIS SUMMEREST.

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JOSHUA WINGATE, Portland.

JOSEPH A. WINTHROP, South Carolina.

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Albro, Charles,	Taunton.	Bates, Caleb,	Kingston.
Alger, R. F.,	Dedham.	Bayley, John P.,	Boston.
Allen, John Fisk,	Salem.	Beal, Alexander,	Dorchester.
Ames, F. L.,	Easton.	Bell, Joseph H.,	Phila., Pa.
Ames, F. M.,	Canton.	Bemis, Emery,	Cambridge.
Ames, George,	Boston.	Berry, James,	Boston.
Ames, P. A.,	"	Bickford, Weare D.,	Allston.
Amory, Charles,	"	Birchard, Charles,	Arlington.
Amory, Frederick,	Brookline.	Black, J. W.,	Boston.
Amory, James S.,	Boston.	Blagg, Samuel,	Newbern, N. C.
Andrews, Charles L.,	Swampscott.	Blanchard, J.W., Jr.,	Boston.
Andrews, Frank W.,	Boston.	Blaney, Henry,	Brookline.
Andrews, W. T.,	"	Blinn, R. D.,	Lexington.
Andros, Milton,	Brookline.	Bocher, F.,	Boston.
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Appleton, Francis H.,	West Peabody.	Bond, George W.,	Boston.
Appleton, Wm. S.,	Boston.	Borland, J. N.,	"
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Ayer, Adams,	"	Bowditch, J. Ingersoll	Boston.
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		Brackett, C. N.,	Newton.
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Banfield, F. L.,	"	Breed, Henry A.,	Lynn.
Barnard, Rev. C. F.,	"	Bresee, Albert,	Hortonville, Vt.
Barnard, James M.,	"	Brewer, John Reed,	Boston.
Barnes, Walter S.,	Somerville.	Brewer, Otis,	"
Barnes, Wm. H.,	Boston.	Brigham, W. T.,	"
Barney, Levi C ,	"	Bright, Jona. B.,	Waltham.
Barratt, James,	Cambridge.	Bright, William E.,	"
Barrett, Aaron,	Malden.	Brimmer, Martin,	Boston.
Barrows, Thomas,	Dedham.	Brintnall, Benj.,	"
Bartlett, E.,	Newburyport.	Brooks, Francis,	Medford.

Brooks, J. W.,	Milton.	Clark, W. L.,	Neponset.
Brooks, Peter C.,	Boston.	Clark, Wm. S.,	Amherst.
Brown, Charles E.,	Yarmouth, N.S.	Clarke, Miss Cora H.,	Jamaica Plain.
Brown, Edward J.,	Brookline.	Clay, Henry,	Dorchester.
Brown, G. Barnard,	Boston.	Cleary, Lawrence,	West Roxbury.
Brown, George B.,	"	Clement, Asa,	Dracut.
Brownell, E. S.,	Essex Junc., Vt.	Cleveland, Ira,	Dedham.
Bruce, N. F.,	Stoneham.	Cobb, Albert A.,	Brookline.
Buckminster, W. J.,	Malden.	Coburn, Isaac E.,	Everett.
Bullard, Wm. S.,	Boston.	Codman, James M.,	Brookline.
Burnham, T. O. H. P.,	"	Codman, Ogden,	Lincoln.
Burnett, Joseph,	Southborough.	Coffin, G. Winthrop,	West Roxbury.
Burr, Fearing,	Hingham.	Coffin, Wm. E.,	Boston.
Burr, Matthew H.,	"	Comer, G. N.,	Dedham.
Buswell, E. W.,	Boston.	Converse, E. S.,	Malden.
Buswell, Mrs. E. W.,	"	Coolidge, Joshua,	Watertown.
Buswell, Frank E.,	"	Copeland, Franklin,	West Dedham.
Butler, Aaron, Jr.,	Wakefield.	Cormerais, Henry,	Dedham.
Butterfield, Wm. P.,	Arlington.	Courtis, William,	Lawrence.
		Cox, George P.,	Malden.
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Calder, A. P.,	Boston.	Crocker, Uriel,	Boston.
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Carruth, Nathan,	Dorchester.	Cruickshanks, James,	"
Carter, Miss Sabra,	Wilmington.	Cummings, John,	Woburn.
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Chandler, J. G.,	S. Lancaster.	Curtis, George S.,	Jamaica Plain.
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Chapman, Edward,	Arlington.	Cushing, R. M.,	"
Chase, A. J.,	Lynn.		
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Clapp, Lemuel,	Dorchester.	Denny, R. S.,	Dorchester.
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Durfee, George B.,	"	Goddard, Mrs. M. T.,	Newton.
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Hill, John, Stoneham.
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Hooper, Robert C., Boston.
Hooper, Thomas, Bridgewater.
Horner, Mrs. C. N. S., Georgetown.
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Hovey, C. M., "
Hovey, John C., Cambridgeport.
Hovey, P. B., "
Howard, Joseph W., South Boston.
Howe, George, Boston.
Howland, John, Jr., New Bedford.
Hubbard, Charles T., Boston.
Hubbard, G. G., Cambridge.
Hubbard, J. C., Boston.
Hubbard, W. J., "
Huckins, J. W., "
Humphrey, F. J., Dorchester.
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Hunnewell, H. H., Wellesley.
Hunt, Franklin, Boston.
Hunt, Moses, "
Hyde, J. F. C., Newton.

Inches, Henderson, Boston.
Inches, Herman B., "

Jackson, Abraham, Boston.
Janvrin, W. S., Revere.
Jeffries, John, Jr., Boston.
Jenks, C. W., "
Joyce, Mrs. Samuel, Medford.

Kakas, Edward, Medford.
Kelley, E. G., Newburyport.
Kendall, D. S., Boston.
Kendall, Edward, Cambridgeport.
Kendall, J. R., Woburn.
Kendrick, Mrs. H. P., Allston.
Kennedy, G. G., Boston.
Kenney, John M., Wareham.
Kent, John, Charlestown.
Keyes, E. W., "
Keyes, George, Concord.
Kidder, H. P., Boston.
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King, Franklin, Dorchester.
King, William S., Boston.
Kingman, A. A., Brookline.
Kingman, C. D., Middleborough.
Kinsley, Lyman, Cambridgeport.
Kittredge, E. A., Boston.

Lamb, Thomas, Boston.
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Lawrence, Amos A., Brookline.
Lawrence, Edward, Charlestown.
Lawrence, James, Boston.
Lawrence, John, "
Lawson, Peter, Lowell.
Leavens, S. Davis, Boston.
Lee, Henry, "
Lemme, Frederick, No. Cambridge.
Leuchars, R. B., Boston.
Lewis, A. S., Framingham.
Lewis, William G., "
Lincoln, D. Waldo, Worcester.
Lincoln, George, Hingham.
Locke, W. H., Belmont.
Lodge, Giles H., Swampscott.
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Lord, George C., Newton.
Loring, Alfred, South Hingham.
Loring, C. W., Boston.
Lothrop, Eben. W., Chelsea.
Lovett, G. L., Boston.
Low, Ariel, "
Lowder, John, Watertown.
Lowell, Augustus, Boston.
Luke, Elijah H., Cambridgeport.
Lumb, Wm., Boston.
Lunt, C. H., Jamaica Plain.
Lyman, Theodore, Brookline.
Lyon, Henry, Charlestown.

Mahoney, John,	Boston.	Otis, T. C.,	Boston.
Maloon, William,	Salem.	Oxnard, George D.,	"
Mann, James F.,	Cambridge.		
Mann, Jonathan,	"	Packer, C. H.,	Boston.
Manning, J. W.,	Reading.	Page, Thomas,	Milwaukee.
Manning, Mrs. L. B.,	"	Paine, Robert T.,	Boston.
Manning, Robert,	Salem.	Palmer, J. P.,	"
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Marland, A.,	Andover.	Parker, Augustus,	Boston.
Marsh, Francis,	Dedham.	Parker, James,	"
Martin, D. A.,	Chelsea.	Parker, William A.,	"
Martin, J. S.,	Boston.	Parkman, Francis,	Jamaica Plain.
Mason, R. M.,	"	Partridge, Henry,	Dunkirk, N. Y.
Matthews, Nathan,	"	Partridge, Horace,	Somerville.
McCarthy, T.,	"	Pearce, John,	West Roxbury.
McClure, John,	Revere.	Peck, O. H.,	Franklin.
Merriam, M. H.,	Lexington.	Peck, W. G.,	Arlington.
Merrifield, W. T.,	Worcester.	Penniman, A. P.,	Waltham.
Miller, E. D.,	Dorchester.	Perkins, Augustus T.,	Boston.
Millmore, M.,	Boston.	Perkins, Edward N.,	Brookline.
Mills, Charles H.,	"	Perkins, William P.,	"
Milton, W. H.,	"	Perry, George W.,	Malden.
Minott, Charles,	Somerville.	Philbrick, William D.,	Newton Centre.
Minton, James,	Dorchester.	Pierce, George W.,	Everett.
Mixter, Charles,	Boston.	Pierce, Henry L.,	Dorchester.
Moore, John B.,	Concord.	Pierce, S. B.,	"
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Morse, S. B.,	"	Poor, John R.,	Somerville.
Morse, Samuel F.,	"	Pope, Alexander,	Dorchester.
Motley, Thomas,	West Roxbury.	Potter, Joseph S.,	Arlington.
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Mudge, George A.,	Brookline.	Pratt, George W.,	"
Mudge, George W.,	Lynn.	Pratt, Robert M.,	"
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Munroe, William,	"	Pray, Mark W.,	Malden.
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Needham, Daniel,	Groton.	Prescott, Eben. C.,	Boston.
Newhall, Cheever,	Dorchester.	Prescott, W. G.,	"
Newhall, George,	"	Prescott, William G.,	Quincy.
Newhall, Josiah,	Lynnfield.	Preston, George H.,	Boston.
Newman, J. R.,	Winchester.	Preston, John,	Dorchester.
Newton, W. W.,	Brookline.	Pringle, C. G.,	Charlotte, Vt.
Nichols, Mrs. F.,	Dorchester.	Proctor, Thos. P.,	West Roxbury.
Nourse, Benjamin F.,	Cambridgeport.	Prouty, Gardner,	Littleton.
Nourse, B. F.,	Boston.	Putnam, Joshua H.,	Brookline.
Osgood, Jas. Ripley,	Boston.	Ramsay, A. H.,	Cambridge.

Rand, Miss E. L.,	Newton.	Smith, George O.,	Boston.
Rand, E. S.,	Boston.	Smith, James H.,	Needham.
Rand, E. S., Jr.,	Dedham.	Smith, Joshua B.,	Cambridgeport.
Rand, Oliver J.,	Cambridgeport.	Smith, Peter,	Andover.
Rayner, John J.,	Lexington.	Smith, W. B.,	Boston.
Reed, George W.,	Kingston.	Snow, Eben,	Cambridge.
Richards, William B.,	Boston.	Southmayd, John K.,	Boston.
Richardson, C. E.,	"	Sparhawk, Edwd. C.,	Brighton.
Richardson, Geo. C.,	Cambridge.	Sparhawk, Geo.,	Lexington.
Robbins, Nathan,	Arlington.	Spaulding, Edward,	Jamaica Plain.
Robeson, W. R.,	Boston.	Speare, Alden,	Newton Centre.
Robinson, John,	Salem.	Springall, George,	Malden.
Robinson, J. H.,	Dorchester.	Springer, John,	Sterling.
Rogers, John H.,	Boston.	Stetson, James A.,	Quincy.
Ross, Henry,	Newton.	Stetson, Nahum,	Bridgewater.
Ross, M. D.,	Boston.	Stickney, Josiah,	Watertown.
Ross, Waldo O.,	"	Stickney, Rufus B.,	Somerville.
Russell, Walter,	Arlington.	Stimpson, George,	New York.
		Stimpson, H. H.,	Cambridge.
Sampson, G. R.,	New York.	Stone, G. F.,	Newton.
Sanborn, Amos C.,	Cambridgeport.	Stone, Phineas J.,	Charlestown.
Sandford, O. S.,	Cordaville.	Story, E. A.,	Brighton.
Sargent, Charles S.,	Brookline.	Strong, William C.,	"
Sargent, Ignatius,	"	Sturgis, John H.,	Boston.
Sargent, Turner,	Boston.	Sturgis, Russell, Jr.,	"
Saville, R. L.,	Brookline.	Sturtevant, E. Lewis,	S. Framingham.
Sawyer, E. H.,	Easthampton.	Sumner, Edward,	Dedham.
Sawyer, Timothy T.,	Charlestown.	Surette, L. A.,	Concord.
Scott, Charles,	Newton.	Swain, Charles D.,	Roxbury.
Scudder, C. W.,	Brookline.		
Seaver, Nathaniel,	East Boston.	Taft, John B.,	Boston.
Seaver, Robert,	Jamaica Plain.	Tappan, Charles,	"
Shaw, C. C.,	Boston.	Taylor, Horace B.,	"
Shaw, S. P.,	Cambridge.	Thacher, Alfred C.,	Dorchester.
Sheafe, Charles C.,	Boston.	Thayer, Henry,	N. Cambridge.
Sheafe, William,	Brookline.	Thayer, Nathaniel,	Boston.
Sheldon, O. S.,	Milton.	Thompson, S. Benton,	Lexington.
Shimmin, Charles F.,	Boston.	Thorndike, John H.,	Boston.
Shorey, John L.,	Lynn.	Tilton, Stephen W.,	"
Skinner, Francis,	Boston.	Todd, John,	Hingham.
Slack, Chas. W.,	Boston.	Tolman, Benj.,	Concord.
Slack, Lewis,	Brookline.	Tolman, Miss H. S.,	Boston.
Smith, Benjamin G.,	Cambridge.	Torrey, Everett,	Charlestown.
Smith, Charles A.,	Boston.	Towne, William B.,	Boston.
Smith, Charles H.,	Jamaica Plain.	Turner, J. M.,	Dorchester.
Smith, Chauncy,	Cambridge.	Turner, R. W.,	Newton.
Smith, E. N.,	Boston.	Turner, Royal W.,	Randolph.

Underwood, Guy C., Boston.
Upham, Henry, Brookline.
Vinton, A. H., D.D., Boston.
Vose, B. C., Hyde Park.
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Wainwright, Wm. L., Braintree.
Wakefield, E. H., Chelsea.
Walcott, Edward, Pawtucket.
Walker, Edward C. R., Boston.
Walker, Samuel A., "
Walker, T. W., Waltham.
Ward, John, Newton.
Wardwell, W. H., Newton Centre.
Ware, Benjamin P., Marblehead.
Warren, G. W., Boston.
Wason, E., Brookline.
Waters, Edwin F., Newton Centre.
Waters, George F., Newton.
Watts, Isaac, Belmont.
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Weld, Aaron D., West Roxbury.
Weld, Dr. M. W., Boston.
Weld, Richard H., "
Weld, W. G., Brookline.
Weston, Seth, Revere.
Wetherell, Leander, Boston.
Wheelwright, A. C., "
Whipple, John A., "
Whitcomb, Wm. B., Medford.
White, B. C., Boston.
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White, Francis A., Brookline.
Whiteley, Edward, Cambridge.
Whiting, Nathaniel, Brookline.
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Williams, Aaron D., Boston.
Williams, Benj. B., "
Williams, Philander, Taunton.
Willis, George W., Chelsea.
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Wilson, Henry W., South Boston.
Winship, F. Lyman, Brighton.
Winship, Herman, "
Woerd, C. V., Waltham.
Woerd, C. V., Jr., "
Wood, L. H., Marlborough.
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Wood, Wm. K., West Newton.
Woodward, Royal, Brookline.
Wright, George C., West Acton.
Wrisley, Frank, New York.

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Allen, Nathaniel T.,	" "
Allen, W. H.,	Dedham.
Alley, Franklin,	Marblehead.
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Atkinson, Edward,	"
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Bacon, William,	"
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Breck, C. H. B.,	"
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Brown, Jacob,	Woburn.
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Chilson, G.,	Boston.
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Clark, Joseph W.,	Dedham.
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Converse, Parker L.,	"
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Crafts, W. A.,	Boston.
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Curtis, D. T.,	Boston.
Curtis, Joseph H.,	"
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Davis, Frederick,	Newton.
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Davis, W. H.,	Milton.
Day, Geo. B.,	Boston.
Dean, A. J.,	"
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Dennison, J. N.,	Boston.
Dike, George W.,	Stoneham.
Dillaway, Chas. K.,	Boston.
Dixwell, J. J.,	West Roxbury.
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Dupee, James A.,	Brookline.
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Eaton, Russell P.,	Dorchester.
Edgar, William,	Newtonville.
Edmands, J. W.,	Newton.
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Evers, Gustave,	Boston.
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Falconer, John,	Rochester.
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Farrier, Amasa,	Stoneham.
Farrier, Mrs. C.,	"
Fay, Henry G.,	Brookline.
Felton, A. W.,	West Newton.
Fenno, Thomas L.,	Somerville.
Fletcher, Edwin,	Acton.
Foley, Bernard,	Boston.
Foster, Joshua T.,	Medford.
Foster, Nath'l, Jr.,	Belmont.
Fowle, H. D.,	Boston.
French, Asa,	Braintree.
French, Henry F.,	Boston.
French, W. E.,	"
Frink, Charles T.,	Andover.
Frost, George,	West Newton.
Frost, Rufus S.,	Chelsea.
Frost, Stiles,	West Newton.
Frothingham, I. H.,	Dorchester.
Fuller, W. G.,	Stoneham.
Furneaux, Charles,	Melrose.
Gage, Edmund,	Bradford.
Gage, Edwin V.,	"
Gane, Henry A.,	West Newton.
Gardiner, Claudius B.,	West Newbury.

Gardner John,	Dedham.	Heath, Geo. W.,	Melrose.
Garfield, Charles,	Medford.	Heustis, Warren,	Belmont.
Gaut, S. N.,	Somerville.	Hews, Albert H.,	No. Cambridge.
Gay, Samuel S.,	Boston.	Higbee, C. H.,	Salem.
Gay, Timothy,	Chelsea.	Hill, Benj. D.,	Peabody.
Gerry, Charles F.,	Hyde Park.	Hill, Henry Y.,	Belmont.
Gilbert, B. W.,	Boston.	Hillard, George S.,	Boston.
Gilbert, John,	"	Hittenger, Miss M. E.,	Belmont.
Gilbert, Samuel,	"	Hodgdon, R. L.,	Arlington.
Gilbert, W. A.,	Neponset.	Holbrook, G. L.,	Boston.
Gill, Mrs. E. M.,	Medford.	Holmes, G. W.,	"
Gleason, C. W.,	Boston.	Horne, C. F.,	Watertown.
Gleason, Herbert,	Malden.	Howe, Estes,	Cambridge.
Godbold, G. A.,	Chelsea.	Howe, Rufus,	Marlboro'.
Goddard, Thomas,	Boston.	Hubbard, J. W.,	Boston.
Goodwin, Lester,	Brighton.	Humphrey, G. W.,	Dedham.
Gove, George G.,	Cambridge.	Humphrey, John,	Dover.
Grant, Charles E.,	Boston.	Hutchins, Ezra C.,	Newton.
Graves, Frank H.	West Newton.	Hyde, George,	Charlestown.
Gray, Edward,	Boston.		
Gray, John C.,	"	Ireland, George W.,	Somerville.
Gray, Wm., Jr.,	Dorchester.		
Green, Franklin,	Jamaica Plain.	James, W. E.,	Jamaica Plain.
Greenwood, E. H.,	Newton Centre.	Jameson, G. W.,	East Lexington.
Grew, Henry,	Dorchester.	Johnson, H. A.,	Jamaica Plain.
Guerineau, Louis,	Malden.	Jones, George H.,	Newton.
		Jones, Moses,	Brookline.
Hadley, T. B.,	Stoneham.	Jordan, Samuel,	Yarmouth.
Haines, Robert J.,	Boston.		
Haley, Jesse,	Cambridgeport.	Keith, W. W.,	Boston.
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Hall, William T.,	Revere.	Kendall, Jonas,	Framingham.
Hamlin, D. A.,	South Boston.	Kennard, Chas. W.,	Boston.
Harrington, Wm. H.,	Salem.	Kennard, M. P.,	Brookline.
Harris, Miss Ellen M.,	Jamaica Plain.	Kenrick, Miss A. C.,	Newton.
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Harris, Horatio,	Boston.	Kittredge, Alvah,	"
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Harwood, Geo. S.	Newton.	Lang, John H. B.,	Dorchester.
Haskell, Edward,	New Bedford.	Langworthy, I. P.,	Chelsea.
Hatch, Samuel,	Boston.	Lathrop, John,	Dedham.
Hayes, John L.,	Cambridge.	Law, G. A.,	Roslindale.
Hayward, Geo. P.,	Hingham.	Leavens, E. W.,	Malden.
Hayward, James T.,	Boston.	Lee, Francis H.,	Salem.
Hazelton, H. L.,	"	Lee, Francis L.,	Brookline.
Healey, Mark,	Lynn.	Leeds, Samuel,	South Boston.

Leonard, Joseph,	Boston.	Nichols, J. R.,	Haverhill.
Lincoln, Calvin A.,	Hingham.	Northey, William,	Medford.
Lincoln, F. W., Jr.,	Boston.	Norton, P.,	Boston.
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Loring, Charles G.,	Boston.	O'Brien, James,	Jamaica Plain.
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Lowell, John,	Newton.		
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McIntire, Joseph,	Melrose.	Parker, James M.,	Charlestown.
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McLaren, Anthony,	Forest Hills.	Parker, Nelson,	Stoneham.
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Mills, John F.,	"	Phipps, Samuel, Jr.,	Boston.
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M'Intosh, A. S.,	Boston.	Pratt, Samuel,	Chelsea.
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Morse, W. A.,	Boston.	Putnam, Francis,	"
Morton, J. H.,	"		
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		Ranlett, S. A.,	Melrose.
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Ray, Edwin, Boston.
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Rice, Edward E., Dorchester.
Rice, George W., Boston.
Richards, Francis, "
Richards, John S., Brookline.
Richardson, E. P., Lawrence.
Richardson, Horace, Framingham.
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Rogers, John F., Cambridge.
Ruggles, John, Brighton.
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Russell, Joseph M., Malden.

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Saville, George, Quincy.
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Shedd, Arthur B., "
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Shepherd, Edwin, Lowell.
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Smith, Thomas H., Boston.
Snow, E. A., Melrose.
Southworth, Edward, Quincy.
Spooner, W. H., West Roxbury.
Sprague, Charles J., Boston.
Squire, J. P., Arlington.
Stanwood, E. How'd, Grantville.
Starbird, Louis D., Malden.
Stearns, Charles, Brookline.
Stevens, E. C., Cambridge.
Stone, Eliphalet, Dedham.
Stone, Milton J., Brookline.
Stone, Samuel G., Charlestown.
Story, Miss Sarah W., Brighton.
Sullivan, J. L. D., Somerville.
Swan, C. W., Boston.

Tailby, Joseph, Wellesley.
Tainter, A. E., Medford.
Talbot, Josiah W., So. Dedham.
Talbot, W. H., Boston.
Tapper, Thomas, Canton.
Taylor, Moses, Acton.
Thatcher, L. P., Middleboro.
Thompson, G. M., Waltham.
Tobey, Miss M. B., Brookline.
Todd, Jacob, Boston.
Torrey, Augustus, Beverly.
Tower, Elisha, Lexington.
Train, Gorham, Dorchester.
Trautman, Martin, Boston.
Tucker, E. G., "
Tufts, James W., Medford.
Turner, N. W., Everett.
Tuttle, Samuel J., Boston.

Underwood, Wm. J., Belmont.

Vandine, Henry, Cambridgeport.
Van Voorhies, H. W., Everett.
Vinton, Mrs. C. A., Boston.
Vinton, Miss Mary P., "

Walker, Charles H., Chelsea.
Walker, Joseph T., Boston.
Walker, Wm. P., Somerville.
Wallis, M. L., West Roxbury.
Wallis, William, Boston.
Walsh, M. H., Brighton.
Waltham, George, Nahant.
Ward, Edward A., Cambridge.
Warren, Samuel D., Waltham.
Washburn, E. F., Neponset.
Washburn, G. W. C., Boston.
Watson, B. M., Plymouth.
Watson, David, Malden.
Webster, J. R., Boston.
Webster, John, Salem.
Wellington, Chas. A., E. Lexington.
Wellington, Jos. V., Cambridge.

Wells, Benjamin T.,	Boston.	Wilson, B. O.,	Watertown.
Wetherell, John G.,	"	Wilson, Geo. W.,	Malden.
Wheatland, Henry,	Salem.	Wiswall, Artemas,	Newton.
Wheeler, Miss Ann C.,	Cambridgeport.	Wiswall, Henry M.,	Watertown.
Wheildon, Wm. W.,	Concord.	Wood, Mrs. Anna D.,	West Newton.
White, N. B.,	Norwood.	Wood, Miss C. S.,	"
White, T. C.,	Charlestown.	Wood, Edmund M.,	Boston.
Whitney, Joel,	Winchester.	Wood, E. W.,	West Newton.
Wilcox, Wm. H.,	Reading.	Woodbury, Chas.,	Beverly.
Wilder, Chas. T.,	Grantville.	Woodford, Jos. H.,	Newton.
Wilkins, C. W.,	Boston.		
Williams, Dudley,	Jamaica Plain.	Young, Thos. Jr.,	Somerville.
Williams, Elijah,	Boston.	Young, William,	Fall River.
Williams, H. W.,	"		
Williams, Stephen,	"	Zirngiebel, D.,	Needham.
Wilmarth, H. D.,	Jamaica Plain.		

EXTRACTS FROM THE BY-LAWS.

SECTION XXVI. — Life Members.

The payment of thirty dollars shall constitute a Life Membership, and exempt the member from all future assessments; and any member, having once paid an admission fee, may become a Life Member by the payment of twenty dollars in addition thereto.

SECTION XXVII. — Admission Fee and Annual Assessment.

Every subscription member, before he receives his Diploma, or exercises the privileges of a member, shall pay the sum of ten dollars as an admission fee, and shall be subject afterwards to an annual assessment of two dollars.

SECTION XXIX. — Discontinuance of Membership.

Any member who shall neglect for the space of two years to pay his annual assessment shall cease to be a member of the Society; and the Treasurer shall erase his name from the List of Members.

The attention of Annual Members is particularly called to Section XXIX.

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